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BANKING, MONETARY POLICY, AND ECONOMIC GROWTH

IN GERMANY, 1765-1850

by



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OF MASTER OF ARTS

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Banking, Monetary Policy, and Economic Growth in Germany 1765-1850," submitted by Joachim Bernhard Czypionka in partial fulfilment of the requirements for the degree of Master of Arts.

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ABSTRACT

This is a study of the politics of money in an industrializing society. It attempts to analyze the imbalance that usually exists between various sectors of a country's economic activity in which one acts as a restrainer upon another, perhaps more advanced one. To this end, this thesis goes beyond an examination of numbers, statistics, and tables. It will examine the people and their institutions who determined monetary policy during the early years of German industrialization.

The inquiry goes back to the last decades of eighteenth century Germany, a time during which opposition to mercantilism began to gain momentum. We witness the growing conflict between the enlightened bureaucracy of the eighteenth century which remained--in Prussia perhaps more than any place else--servant to the sovereign, and the rising class of entrepreneurs which challenged the former's patronizing and regimenting ways of administering the economy. We will ask ourselves why the economic dynamism of Prussian Germany during the 1830's and 1840's was not shared by the state bureaucracy. The answer to this question will provide a further understanding of the events of 1848 and of the period of economic expansion and political reaction which followed this fateful year.

Central to this study is the recognition of the fact that the governments of Germany, and especially of Prussia, consistently assumed the permanency of income and wealth. Based on this assumption was the state's decision that any additional capital would only have a transitory

effect on the country's economy because of the human failure that the people will only try to regain the former equilibrium between receiving and spending, and thus only increase the nominal value of goods and services. The ultimate position, so it was thought, would be no economic improvement within the community except for perhaps some initial imbalance in the distribution of this capital as some individuals would control larger real balances than others, giving rise to uncontrollable speculation. The state saw in this development a threat to its own economic interests, and the bureaucracy a challenge to its privileged position. Consequently, while the economic planners opposed for this reason the increase of the nominal quantity of money, they retarded its real quantity. Lack of experience and knowledge in economic matters, of foresight and temperament of the governments and their ministers forced a deflationary monetary policy onto a budding industrial country. The consequences of this policy will be shown on hand of the events that led to the German capital crisis of the late 1840's.

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I wish to express my gratitude to Professor Helen P. Liebel-Weckowicz who provided much constructive criticism when a preliminary study of Chapter I was read as a paper at the Sixth Annual Northwest Conference of History Students, held at Edmonton, Alberta, on May 2, 1970. She had suggested that the interplay between banking, state fiscal management and economic growth of early nineteenth century Germany be made the topic of this thesis. As my supervisor she bore the burden of controlling a hasty pen and of demanding clarity. For her abundant help my thanks.

I take also pleasure in acknowledging the assistance provided by Mrs. O. Anderson, Miss Mielke, and the staff of the Reference and Interlibrary Loan Department of the Cameron Library, University of Alberta. Their untiring patience in locating and obtaining research material is commendable. Furthermore, without the kind permission of Mr. Les Gutteridge, Cameron Library, to use the extensive pamphlet collection of contemporary opinion, much of the essence of the thesis would be amiss.

Finally, the greatest pleasure of all is to acknowledge the help of my wife. She patiently endured the antics of a student lost in thought, she listened when I felt the need to talk, she patiently submitted to the many hardships inherent in the role of mother, wife, and active nurse on night duty. She shall now share with me the joy of accomplishment.

J. B. C.

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ABBREVIATIONS

A. Publications

ADB	Allgemeine Deutsche Biographie (Leipzig, 1875-1912)
ALR	Allgemeines Preussisches Landrecht
AHGS	Allgemeine Handels- und Gewerbs-Geographie und Statistik: Ein Handbuch für Kaufleute, Fabrikanten und Staatsmänner (Reden)
DVS	Deutsche Vierteljahrs-Schrift; Deutsche Viertel-Jahrsschrift
EVS	Erwerbs- und Verkehrs-Statistik des Königsstaats Preussen: In vergleichender Darstellung (Reden)
GS	Gesetz-Sammlung für die Königlichen Preussischen Staaten
HS	Handbuch der Statistik des preussischen Staats(Dieterici)
JAS	Jahrbuch für die amtliche Statistik des Preussischen Staats (Kgl. Statistisches Bureau)
NCC	Novum corpus constitutionum
NDB	Neue Deutsche Biographie (Berlin, 1953-)
PP/HC	Parliamentary Papers of the British House of Commons
StenBer.	Stenographischer Bericht über die Verhandlungen der deutschen constituirenden Nationalversammlung zu Frankfurt am Main
SVV	Statistische Uebersicht der wichtigsten Gegenstände des Verkehrs und Verbrauchs im deutschen Zollvereine (Dieterici)
SZND	Statistik des zollvereinten und nördlichen Deutschlands (Viebahn)
ZSB	Zeitschrift des Königlich Preussischen Statistischen Bureau

B. Other

AKO	Allerhöchste Kabinets-Ordre (Royal Cabinet Order)
Ffm.	Frankfurt-am-Main
fl.	Florin, Gulden
Frhr.	Freiherr (baron)
Hbg.	Hamburg
Hnvr.	Hanover
mgrts.	migrants
pfg.	Pfennig
sgr.	Silbergroschen
thlr.	Thaler

PART I

THEORIES AND FACTS OF ECONOMIC GROWTH:
THE GERMAN EXPERIENCE 1800-1860

CHAPTER I

PROBLEMS OF 1848: AN INTRODUCTORY NOTE

An astute observer of the economic conditions prevailing in Germany during the 1848 Revolution would have noticed that while the country had embarked on industrialization, it had not yet solved the two basic problems of the modern economy. These involved efficient transfer of goods and the establishment of an effective credit system. The parliamentarians of the Frankfurt Assembly who met in St. Paul's Church were aware of the importance of the economic crisis behind the rebellion. In the view of at least one historian,¹ they asserted their views clearly and boldly, and created the Committee for Economic Affairs (Ausschuss für Volkswirtschaft) in order to cope with the country's economic ailments.

The economic committee was later severely criticized. In spite of the conservative Fürst Lichnowsky's impression that he and his colleagues were suffering from "verbal diarrhea," "motion rage," and "interpellation fever,"² the member from Stendal/Magdeburg, Wilhelm Wichmann, came away from Frankfurt complaining about the Committee's inaction. He stated that although it displayed diligence and its members developed "a noble emulation," it was unable to produce anything substantial because "the deluge of complaints and petitions it had to deal with dissipated its strength."³ Indeed, the Committee had received the lion's share of submissions presented to the Assembly by its members and the

public.⁴ It is this very deluge Wichmann spoke of and the resulting debates, comments, and interpellations Fürst Lichnowsky referred to in his characteristic sarcasm that provide us with an interesting reflection of the German economic conditions of the first half of the nineteenth century.

Most members were aware of the economic crisis. There seemed to have been general agreement of a link between the outbreak of disturbances and the economic problems that plagued the country. "The material and social interests of the people are the primary factors that motivate a revolutionary movement," concluded the Committee in one of its reports.⁵ Their conclusion was substantiated by Hermann von Beckerath, earlier a celebrated orator of the Prussian United Legislative Assembly (Preussische Vereinigte Landtag) and a prominent banker from Crefeld, a leading town in the industrial Rhineland. His remarks at Frankfurt stressed the observation that economic conditions in many parts of Germany were so bad that people evidently could not see further than the immediate satisfaction of their most basic needs. In his opinion this also accounted for the underlying widespread apathy toward political affairs.⁶

Other contemporaries expressed similar views. Georg Büchner, the German dramatist, who had hoped to awaken the people by means of his radical pamphlet "Der hessische Landbote" in which he linked the economic interests of the people with a revolutionary movement, "had to admit that the common people were unable to understand any explanation of their relationship with the German Confederation and therefore would not pay heed to any summons to fight for their inherited rights."⁷ In reference to the south-east German and Austrian rural population, Karl Grünberg concluded almost fifty years later:

Political ambitions among these people were non-existent for they did not understand either party programs or political manifestoes. They did not support the revolution because their aims happen to coincide with those of the bourgeois intelligentsia but rather because it seemed expedient for the realization of their hopes. It was not the unbearable pressure exerted by the absolute government, it was its unsympathetic attitude toward their economic demands that made them support the revolution.⁸

The people had indeed far stronger elementary reasons for unrest than was indicated by all the liberal constitutional demands with their popularity.⁹

The most successful of all the German patriotic poets of this era, Hoffmann von Fallersleben, a prominent voice of liberalism, took a different tack and warned that "Michel will never sleep again."¹⁰ Friedrich Engels, however, had to admit that a social revolution was not to be expected, inferring that one would be rather inopportune at this time:

For now we need you gracious gentlemen of capital! You have to sweep away the vestiges of the middle ages and the absolute monarchy for us. You must centralize, you must transform all more or less property-less classes into true proletarians, into recruits for our cause. Through your factories and your commercial relations you will lay the basis for the material means required by the proletariat for its liberation. As a just reward, we let you rule for a short time, but do not forget, the henchman awaits you.¹¹

Yet, Karl Marx' spirit¹² seems to have been released at least to the point where the workers of the country recognized that their interests were different from those of the bourgeoisie. While becoming increasingly more conscious of their strength, they began to organize and to demand recognition and the alleviation of their social plight. The most mature of all attempts was the Workers' Congress held at Berlin from August 28 to September 3, 1848. The introduction to the constitution of the Central Committee of Workers which emerged from this meeting reads:

We take our affairs into our own hands and no one will ever again tear them from us. But together with this feeling of our strength we also know that in our fatherland there are as yet no two sharply divided classes of capitalists and workers, but that each of these still contains other elements.¹³

Stephen Born,¹⁴ the author of these words, was obviously no follower of the Communist League, although he was familiar with Marx' and Engels' writings. Nevertheless, the Congress demanded better housing for workers, progressive income taxes, a ten-hour work day, the establishment of an arbitration board consisting of labor and management to settle wage disputes, better educational facilities, and numerous other items, testifying an active proletarian movement.¹⁵

Obviously, revolutionary fervor and political apathy co-existed. One ought not to conclude, however, that the Germans suddenly wanted to participate in the government just because many more loudly demanded to be heard. Most had neither the education nor the inclination or attitude to follow political ambitions. Wichmann reported from his constituency that the people had succumbed to "a deep political slumber,"¹⁶ and Senator Duckwitz wrote that in the final analysis, "everyone wanted to remain what he already was, a Bavarian, a Saxon, a Hanoveranian."¹⁷

The only issue on which everyone seems to have agreed was that the economy needed to be stimulated quickly and thoroughly, even if they differed on how to go about it. The chairman of the Committee for Economic Affairs, von Rönne/Berlin, pointed out that the importance of the Committee's work lay in the recognition that any attempt to unify Germany politically will have to be preceded by having made "every German state materially and economically interdependent."¹⁸

What perhaps most people did not realize was that Germany was already involved in a major reorganization of her economic structure. For the time being, certainly, the country was still predominantly agrarian in the sense that most people found employment within this branch of the economy. Agriculture still provided the main interest in capital investment¹⁹ (Table 1).

TABLE 1

AGRICULTURAL EMPLOYMENT, INCOME, AND CAPITAL INVESTMENT IN
GERMANY 1849-1859^a

Employment ^b (% of population)				Income (% of total income)		Capital Investment (% of total invstmt.)	
1849	1852	1855	1858	1850/54	1855/59	1850/54	1855/59
56.0	55.1	53.8	53.1	44.0	41.4	52.2	49.8

^aWalther G. Hoffmann, Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts (Berlin, 1965; hereafter referred to as Wachstum), pp. 44, 95, 204. Cf. also SZND, III, 559-70.

^bIn the Kingdom of Saxony in 1852, only 34.4% of the total population worked in agriculture (SZND, III, 567-68), in 1861 only 26.8% (Karl August Müller, ed., Statistisches Jahrbuch für 1845 [Leipzig, 1848], pp. 35-38).

Projecting the statistically recorded evidence of Prussia for the whole of Germany, an acceptable practice among statisticians since almost all changes which occurred in Prussia after 1815 indicated the general trend of development throughout Germany,²⁰ we find a drastic reduction of the rural population and hence employment in 1858 as compared with forty years earlier (Table 2).

In addition, one needs to consider that although reforms to meet new demands were already instigated as early as 1763 when the Silesian Chamber, the provincial arm of the central government, urged the "extinction of servitude and of all indeterminable service obligations,"²¹ the effects were not significant enough to have changed the basic social structure of the population until the 1820's. From then on, a steady and subsequently accelerating decline of agricultural employment took place,²² not to mention a number of other developments that became, seen in retro-

TABLE 2

RURAL EMPLOYMENT IN PRUSSIA 1816-1858^a
(in thousands)

	1868	1849	1858
1. Self-employed ^b			
a. Agriculture as main source of income		..	795
b. As secondary source of income	938	..	422
2. Hired ^c			
a. Agriculture as main source of income		..	1,716
b. As secondary source of income	2,260 ^d		
3. Number of dependents of nos. 1 and 2 above	4,800 ^d	..	4,928
4. Total population	10,403	16,398	17,740
5. Total rural population	7,998 ^d	8,368	8,057
6. Percentage of the rural of total population	(76.9)	51.2	45.4

^aJAS, I, 77, 279-86; HS, p. 154.

^bOwners and leaseholders for periods of 6 years and over.

^cIncludes single and domestic employees.

^dEstimated.

spect, significant steps in the process toward industrialization. While most of these changes had gone on largely unnoticed from year to year, the cumulative effect must have been significant enough to have enabled Germany to embark upon her later impressive high rate of industrialization. At the time of her political unification in 1871 she was, among other things, the leading continental producer of pig iron and outpaced any other country in the world in terms of annual production increases (Table 3).

TABLE 3

WORLD IRON OUTPUT 1830-1870^a
(in thousands of metric tons)

	1830	1850	Perc. Increase	1870	Perc. Increase
U.K.	680	2,250	330	5,960	264
France	270	400	148	1,180	295
Germany	46	215	467	1,400	350
U.S.A.	180	560	311	1,690	301
World	1,600	4,470	279	12,260	274

^aHerbert Heaton, "Economic Changes and Growth," The New Cambridge Modern History, Vol. X: The Zenith of European Power 1830-1870 (Cambridge, 1960), p. 29.

If one now considers that at the end of the Napoleonic era Germany was a backward country, known for her great poverty in skill and capital,²³ this development becomes more significant. Any justifiable criticism of simplistic approaches toward a theory of economic growth notwithstanding,²⁴ one must admit that in Germany the transition to a modern economic growth pattern--apparently an important precondition for any large-scale industrial expansion--must have taken place during the first half of the nineteenth century. While there does not exist any general agreement among those concerned with this problem, and the quantity of publications is indicative of the controversy as well as of its importance, this transition nevertheless marks the beginning of a growth pattern vastly different from that of the preceeding century.²⁵

CHAPTER II

THEORIES AND THE FACTS OF GERMAN ECONOMIC GROWTH

What identifies the transition to a modern economic growth pattern? It is argued that the modern theory of economic growth ought not to concern itself with an analysis of empirical data whose interpretations would then form the explanation of the growth of economic systems. One ought rather to attempt to explain economic growth as a reflection of constant adjustment toward a desired state of equilibrium.²⁶ In short, central to this theory is the problem of instability and how man adjusts to it.²⁷

Keeping this in mind, one is immediately confronted with the problem of what identifies "economic growth forces." The changes so termed and which are customarily used to identify the transition are found by analyzing the necessary changes in the physical environment of economic activity. These include the industrial structure, the size and composition of capital stock, and the structure of the labor force. This approach is acceptable providing one remembers that these forces represent only the required conditions and manifestations of the growth process and not the active growth creating factors per se, a distinction generally recognized.²⁸ It is for this reason that it was suggested that the dynamic of causation can only be found on the level of human behavior.²⁹ Admittedly, human behavior plays an important role in the development of economic growth, as we shall see, but it also introduces a subjective element that tends to limit purposeful conclusions. Therefore, any attempt to deter-

mine the transition period will necessarily be based primarily upon a number of phenomena that can be identified and defined in terms of a number of measurable criteria.

First, the transition can be seen and understood quantitatively in terms of national population and production increases. The frequent combination of a high rate of increase of the total population with a simultaneous high growth rate of the income per head, as compared with the pre-industrial past, provides a relationship which bears in itself a still higher absolute rate of increase of the total production.³⁰

The break with the pre-industrial past, according to this supposition, occurred in Germany around 1800. Records indicate that up to then, the annual population increase fluctuated between 0.3 and 0.4 per cent,³¹ notwithstanding some periodic and regional variations, usually the result of famines, wars, the Black Death, or some other destructive cause which brought about an immediate but temporary rise of product per head.³² However, after the turn of the century, the population of Germany rose as much as 1.44 per cent per annum so that by mid-century, the total population had increased by 40 per cent or about ten million souls (Fig. 1).

While this development was taking place, there emerged throughout Germany innumerable signs of a rising standard of living,³³ among them increased spending and consumption in Prussia (Tables 4 and 5). While examining the evidence which supports this conclusion, however, one must remember that large sections of the population struggled to secure life's basic necessities, at least well into the 1830's,³⁴ not to mention a slow decline of employment opportunities and of real wages of artisans.³⁵

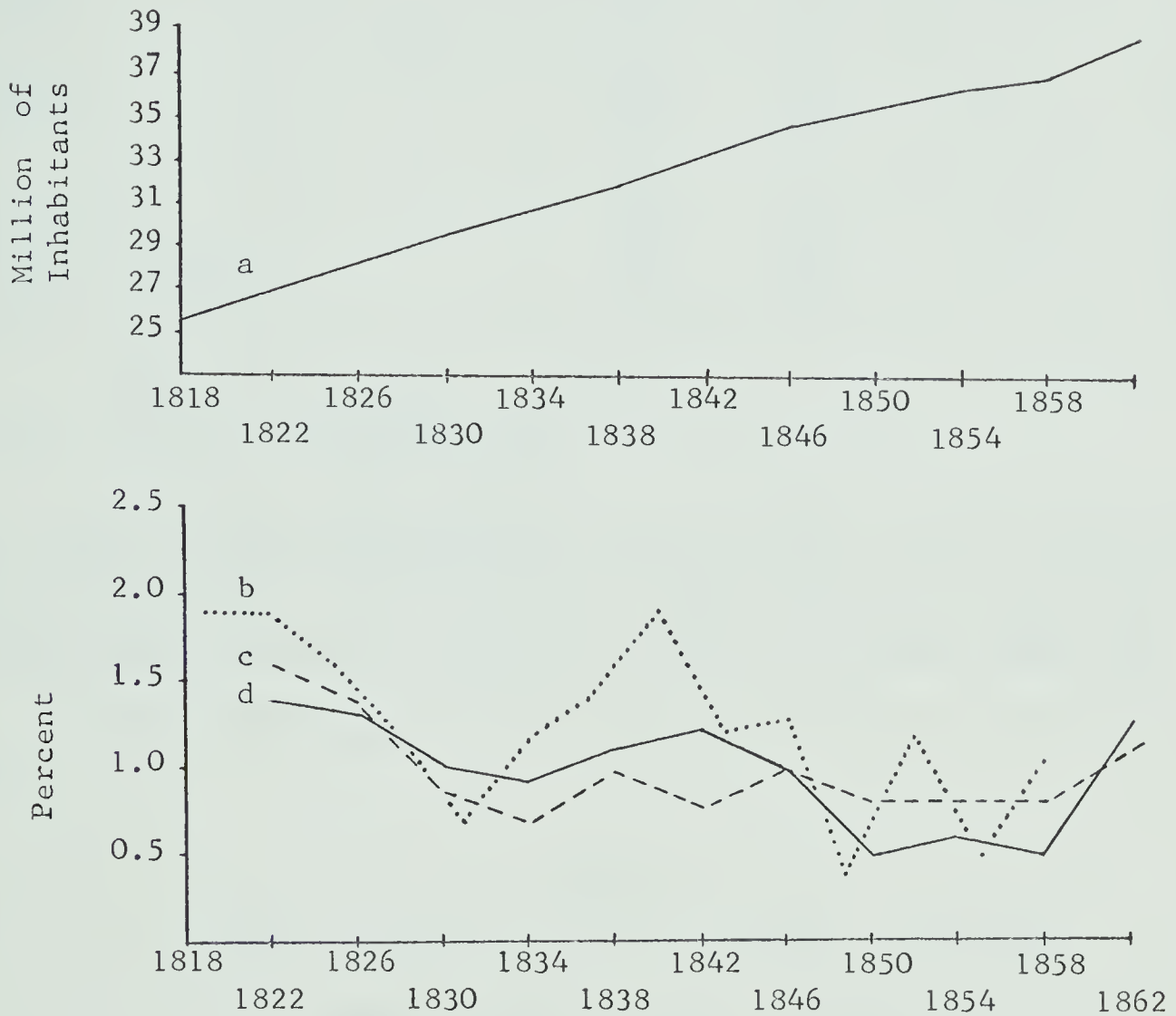


Fig. 1.--The population of Germany and Prussia 1818-1862.

(a) Population of Germany, area as of 1871, excluding Alsace-Lorraine.
 (b) Annual percentage growth rate of the Prussian population.
 (c) Annual percentage growth rate of German net births, i.e., live births minus deaths.
 (d) Annual percentage growth rate of the German population. See also Appendix A.

TABLE 4

ANNUAL PER CAPITA CONSUMPTION IN PRUSSIA 1806-1849^a

Item	Unit of Measure	1806	1831	1842	1849
Grain	kg.	168	168	168	168
Meat ^b		18.5	19.5	19.6	22.4
Rice		0.2	0.3	0.4	0.4
Coffee		0.4	1.3	1.4	2.2
Sugar		0.8	2.5	2.8	3.9
Beer	liter	16.8	16.8	14.6	13.4
Whiskey		3.4	9.0	6.7	9.0
Wine		0.8	2.8	2.2 ^c	2.2
Wool cloth	cm.	38	60	90	60
Linen		240	330	300	300
Cotton yd. goods		45	420	780	960
Silk		15	20	23	40

^aEVS, [I], 240; SVV, I, 84-105, 112-15, 120-22, 129-43, 172-74, 188-95; Dieterici, Volkswohlstand, pp. 13-14, 131-58.

^bDieterici, Volkswohlstand, p. 12, offers the following break-down for 1806: per capita consumption in large cities, 35-40 kg. per annum, in medium cities, 20-25 kg. per annum, in small cities (500-1,000 inhabitants), 8-17 kg. per annum. Since migration toward cities was taking place, the larger annual per capita consumption of meat is largely explainable.

^cFor Württemberg 29.1 liter, Baden 32.6 liter per annum; SVV, II, 181.

TABLE 5

ANNUAL PER CAPITA SPENDING IN PRUSSIA 1806-1849^a

1806 ^b	11 thlr.	15 sgr.	0 pfg.
1831	21 thlr.	5 sgr.	9 pfg.
1842	22 thlr.	3 sgr.	11 pfg.
1849	26 thlr.	21 sgr.	3 pfg.

^aEVS, [I], 241. See also A. Sartorius von Waltershausen, Deutsche Wirtschaftsgeschichte 1815-1914 (2d enl. ed.; Jena, 1923), p. 94.

^bAccording to 1848 prices, this represents appr. 14 thlr.; Dieterici, Preuss. Zustände, pp. 14, 27-28.

Economic hardship in Silesia was unprecedented in its magnitude; the weavers' uprising of 1844 was only a more violent expression of it. On February 10, 1848, Freiherr von Vincke reported from there to the Adjutant of the King, General Georg von Below, "It is truly unbelievable that such great misery had existed for so long and that it was allowed to grow to such proportions without having come to the attention of the [Prussian] government."³⁶ The Silesian authorities "refused with obstinacy to recognize the signs of an impending food shortage," even to the point that the province's president declared categorically in answer to Berlin's queries that "there was nothing to worry about."³⁷ The lack of adequate transportation facilities and of an effective public credit system retarded any efforts to instigate an adequate aid program in the spring of 1848.³⁸ By the time the Frankfurt Assembly convened in May, many artisans throughout the country were desperate.³⁹

Changes of money earnings did not always represent real increases, for inflationary trends ate up real gains. In 1787, a Berlin artisan was able to earn about 120 thaler per annum, of which 90 thaler covered his subsistence. In 1850, he was earning 180 thaler per annum, and he needed all of it to procure life's basic necessities, leaving him no surplus.⁴⁰ This made him extremely sensitive to price fluctuations. He became the victim of a declining income index (the product of number employed and their real earnings), although such a trend coincides generally with real economic expansion. This inverse relationship, measured as a percentage of the gross national product, would indicate an increasing income index only during the years of economic regression. Thus, in spite of the apparent increases of income, spending, and purchasing, in spite of the fact that the gross national product increased

annually during this time by 2.7 per cent, the real value of money increased only by 2.4 per cent.⁴¹

It follows from the above considerations that the greater demand of commodities as seen by the increased purchases (Table 4) can be accounted for by declining purchase prices of these commodities, especially after 1830.⁴² Because of more efficient production methods, production costs became less. Much the same held also true for agriculture. Improved production methods favored a greater shift toward livestock raising, amounting during the first half of the century to an increase of the sheep population of 200 per cent, of the cattle 25, the hog 90, and the goat population 620 per cent, while the production of the staple foods potatoes and rye remained almost constant,⁴³ an indication that the population was also slowly changing its diet habits.

The first half of the nineteenth century also witnessed an increased utilization of the services of the savings banks throughout Germany. Originally founded in connection with the efforts to reform the poor laws, their primary purpose was to safeguard "the poorer classes against absolute poverty by providing a place for the safe deposit of small sums of money until such should be required in bad times."⁴⁴ Savings banks became the "reservoirs of the savings of the people."⁴⁵ Since most banks restricted the use of their services to the low income groups of the population, the day laborers, domestics, and to those who "operate their business without the benefit of outside assistance,"⁴⁶ seventy-five per cent of deposits throughout Germany did not exceed 600 mark even by the end of the century.⁴⁷ Further, the savings banks were to become credit institutions of great importance and thus were losing their philanthropical character, a development to be considered

more fully below. Their evolution becomes a good indicator of the wealth of the country and the people. As a matter of fact, it was pointed out that central to the problem in the theory of economic growth is "the process by which a community is converted from being a 5 per cent to a 12 per cent saver--with all the changes in attitudes, in institutions and in techniques which accompany this conversion,"⁴⁸ a statement based on the assumption that a pre-industrial society did not invest more than 5 per cent per annum of their national income, an economically progressing society, however, 12 per cent or more.

The first German savings banks were established successively at Brunswick (Braunschweig, 1768), Hamburg (1778), Oldenburg (1786), Kiel (1796), at Altona, Limburg, and Göttingen (1801), and from then on in rapid succession so that by the end of the century, Württemberg and Prussia could boast one deposit book practically for every family living within their respective borders.⁴⁹ In Saxony, every 1.8 citizen had one, a remarkable record indeed.⁵⁰ Seen in terms of area being served by these institutes, one bank operated for each 12 square kilometer in Württemberg, for each 20 in Saxony, and one for almost every 82 in Prussia.⁵¹

To gain some insight into the response of the population toward the offered interest premiums, the Prussian example is given once more (Table 6), indicating the general trend within the whole of Germany.⁵² However, in appreciating these statistics, one must not lose sight of the fact that there continued to exist among many people and within many regions the effects of economic backwardness. As a matter of fact, regional economic disparity was to become a major concern for the various governments for many decades.⁵³ Nevertheless, the traditional relationship between productivity, population growth, and standard of living was

broken. Henceforth, an increase of the population and of product per head are concurrent developments. The only exception to this trend was an occasional decrease of the birth rate whenever the price index rose by one per cent or more,⁵⁴ indicating that there still existed a precarious balance between income and those expenses which procured life's basic necessities. After mid-century, this relationship was lost.⁵⁵

TABLE 6

BUSINESS OF THE PRUSSIAN SAVINGS BANKS 1839-1860^a

Abbreviations:

- I: Number of banks in operation, incl. branch offices.
 II: Number of active bank savings books.
 III: Balance at the beginning of year, in million of thlr.
 IV: Deposits of current year, in million of thlr.
 V: Withdrawals of current year, in million of thlr.
 VI: Total balance of deposits at end of current year, in million of thlr.
 VII: Averaged savings per bank savings book, in thlr.
 VIII: Averaged savings per head of population, in thlr.

	1839	1840	1845	1846	1850	1852	1855	1860
I	85	94	157	172	234	246	323	471
II ^b	..	..	..	..	278,147	339,112 ^c	423,542	613,782
III	5.8	..	..	12.4	..	20.5	..	..
IV	2.4	2.7	5.0	5.7	7.9	10.1	13.4	20.5
V	2.0	1.9	3.8	4.2	6.3	7.5	10.1	15.3
VI	6.1	6.8	12.5	14.0	18.1	23.1	32.3	50.5
VII	..	..	..	..	65.1	..	76.2	82.2
VIII	0.41	0.46	0.79	..	1.10	..	1.88	2.77

^aEVS, [III], 2170-71; ZSB (1875), Appendix LI.

^bNo records available prior to 1849.

^cFor this figure, the following break-down is available:
 118,786 deposit books record 20 thlr. or less, 89,019 books 20-50 thlr.,
 71,421 books 50-100 thlr., 41,149 books 100-200 thlr., and 18,717 books
 over 200 thlr.

The foregoing had suggested a rising standard of living, seen partially as a greater demand for consumer goods.⁵⁶ (It is important not to confuse "demand" with "need" but rather to understand "demand" as requiring corresponding purchasing power.) Perhaps one decisive factor was the activities of British and Swiss entrepreneurs who, favored by the improved commercial conditions on the continent after the dissolution of the Napoleonic Empire in 1815, promoted this demand for goods⁵⁷ --Joseph Schumpeter goes so far as to state that "new demands do not arise spontaneously among customers but rather are stimulated by the producer, thus giving him the initiative,"⁵⁸ --a development in line with the commercial policy of the Prussian government.⁵⁹ Although detailed statistical data of net output ratio of consumer and capital goods⁶⁰ are not available for Germany during the period under discussion, it was shown that the ratio of the labor productivity of various industries, especially that of consumer goods industries, showed striking similarities between this country and Britain of the equivalent historical phase of industrialization, taking into account possible differences in technical knowledge, business efficiency, type and number of machines, of length of the working day, and the overall labor efficiency (i.e., the product of skill and morale). The conclusions one arrives at show that the beginning of industrialization proceeded in Germany much the same as did in other countries where a free economy existed.⁶¹ In this light, any differences in the rate of expansion are easily explained by differences in the location of the industries in relation to that of raw materials and markets, by international trade practices, and such non-economic factors as population increase and the socio-political conditions which prevailed in the country,⁶² all these, of course, in turn being influenced by economic growth.

Lack of capital in Germany during the first half of the nineteenth century greatly retarded industrial expansion, hardly a novel conclusion.⁶³ Large quantities of capital goods were imported, especially from Britain, causing a further drain of badly needed capital⁶⁴ and much concern of the British government that through the export of machines and tools, the country would develop its own competition on the continent.⁶⁵ Nevertheless, the German net output of consumer goods increased rapidly,⁶⁶ a development which agrees with the theory that the manufactures of these must expand first in order to create those conditions which make the growth of capital goods production favorable.⁶⁷ Such a development is furthered because, firstly, the skills of craftsmen can be more readily utilized than would be possible in the capital goods industries, secondly, the establishment of these industries requires less capital as well as fewer advanced techniques of production, and thirdly, there generally exists within industrializing economies a progressive increase of man power which becomes available to industries, a point to be taken up below.

Indeed, the German population increased between 1819 and 1831 at an average annual rate of 1.2 per cent, while the processing industries increased employment at an average annual rate of 2 per cent.⁶⁸ Between 1846 and 1858, years of economic crises, the processing industries expanded their operations and increased the number of employees by 21.7 per cent, notwithstanding a rapid drop of the average annual percentage growth rate after 1848 because of the increased use of steam power, while at the same time the population expanded by only 6.4 per cent.⁶⁹ Translated into net productivity and considering the net import of consumer goods,⁷⁰ it can easily be seen that Germany had entered the first phase of industrialization long before the middle of the nineteenth century⁷¹ (Table 4, and Figs. 1 and 2).

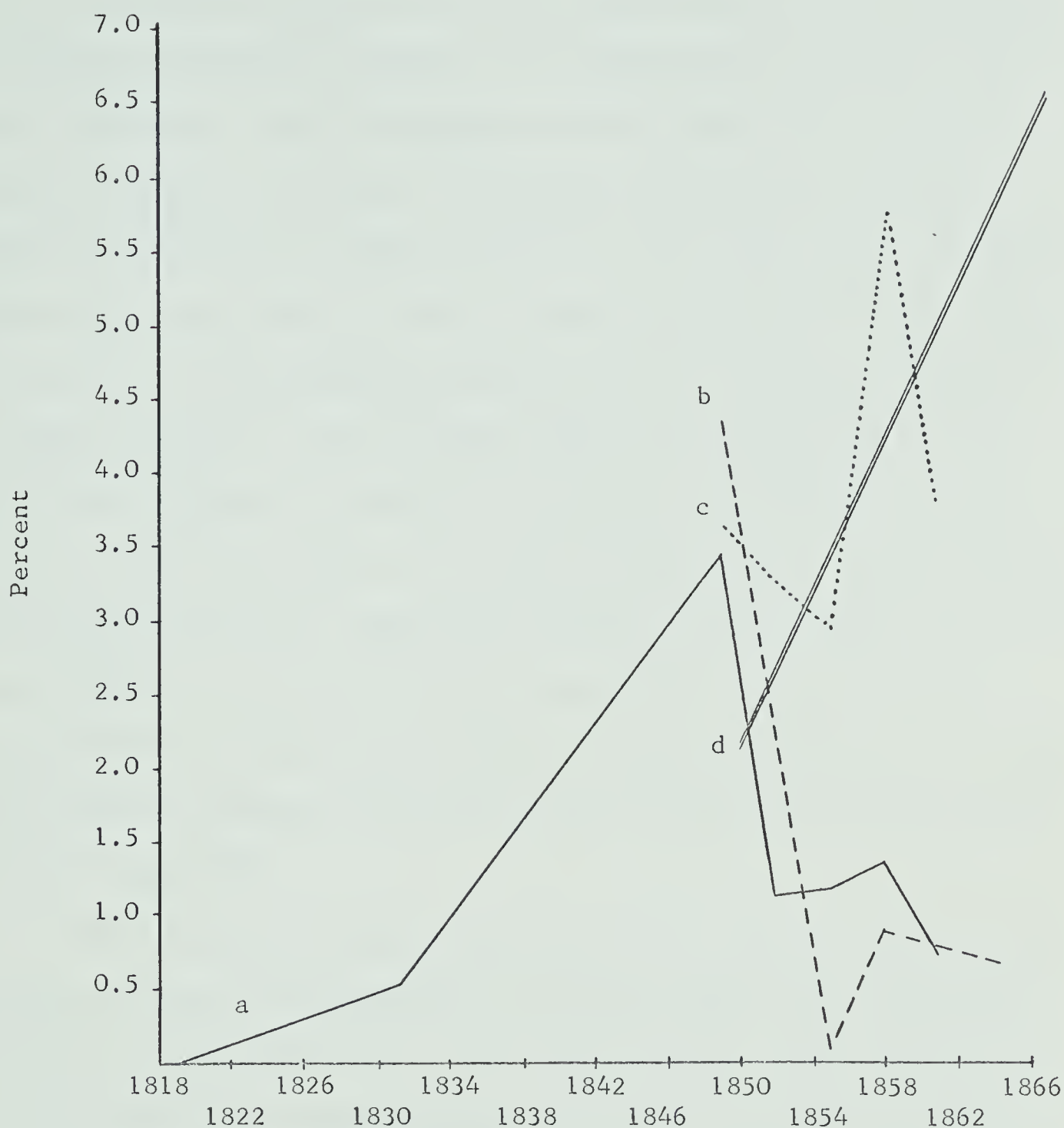


Fig. 2.--Averaged annual percentage growth rates of German and Prussian industrial employment and productivity.

(a) Employment in Prussian flour, groats, and pot-barley mills, showing the rapid decline after the introduction of steam power. (b) Employment in German consumer goods industries (see also *supra*, n. 49). (c) Employment in transport, i.e., the non-technical postal and railroad personnel, merchant marine, etc. (d) The labor productivity index. See also Appendix B.

In this process, agriculture played an important but complex role. The presence of market incentives usually favors the introduction of technical innovations, enabling a more efficient and hence more productive operation. Such a development could be observed in many but by no means all parts of Germany, consequently creating a more favorable climate for a variety of social reforms.⁷² At the same time, a migration toward urban centers began to assume sizable proportions,⁷³ contributing not only labor to the budding industries, but also serious accommodation and supply problems.⁷⁴ This circular chain reaction indicates that new agricultural techniques, production increases, and demographic changes were, in a sense, the result of "a direct outflow of the rising technical civilization and partly a conditioned response to the economic necessities or possibilities created by this civilization."⁷⁵ Not one cause was responsible for starting this evolution, for quantitative as well as qualitative changes originated in Germany also at different times for as many different reasons.⁷⁶

Examining agricultural activity and reform more closely, we find throughout Germany, but especially in the East-Elbian and north-western districts, an intensification of farming operations. The consolidation of scattered holdings (Flurreinigung) became one of the most important features of rural reforms which enabled landowners to cultivate their fields more efficiently. Furthermore, the use of fertilizers became more widespread in practice, supplemented by crop rotation. The result was a higher yield and better and more livestock per cultivated acre.⁷⁷

The agricultural community widened its business orientation and entered a new economic relationship of interdependence with other communities,⁷⁸ replacing the old self-sufficiency of farm and village communities. Wool

became a favorite cash crop. Germany replaced Spain as the world's largest wool producer and exporter in 1817/18, holding this position until Australia's take-over in 1843.⁷⁹ The north-western German lowlands became noted for their dairy products. Other areas became important potatoe regions or favored the relatively new farming venture of raising sugar beets.⁸⁰ All this would not have been possible unless peasant emancipation had been instigated on a large scale.⁸¹ A series of social reforms had to precede production reforms, true enough, yet they also required capital and credit besides reliable markets;⁸² hence, reforms were most readily accepted in industrial areas and regions near trade routes and urban centers.⁸³ These were also the areas which were least affected by the agrarian crises of the first half of the nineteenth century.⁸⁴

The whole process of peasant emancipation, not completed in some areas until the twentieth century, was characterized by the conflicting demands of landlords and peasants. Notwithstanding some opposition to emancipation,⁸⁵ the former needed to remove their tenant farmers in order to increase the efficiency of their operations, while the latter wanted clear and complete title to the holdings they farmed. The traditional interdependence between peasant and lord became the victim of new demands and social changes,⁸⁶ and a new money relationship took its place. The former tenant farmer became a smallholder, a sharecropper, a wage-earning farm laborer, or he migrated to urban centers.⁸⁷

Concurrently, new agricultural techniques were introduced, reducing man power. Land reclamation and the breaking of virgin land became practical enterprises⁸⁸ (Table 7). Thus, we witness a declining number of farm laborers per cultivated acre, discounting the seasonal migrant workers

from the east,⁸⁹ a characteristic development of the first stage of an industrializing economy.⁹⁰ According to Wilhelm Abel, the chronic food shortage was in the process of being removed from the country.⁹¹

TABLE 7
COMMUTATION AND MELIORATION IN PRUSSIA 1811-1866^a

	Number of new owners	Area of their property (in morgen ^b)	Number of days' service abolished		Melioration (in morgen)
			Team service	Hand labor	
1811-20 ^c	18,256	1,557,386	920,735	952,843	2,926,922 ^d
1821-48	52,326	3,601,441	5,057,560	15,916,981	
1849-65	12,706	352,305	366,274	6,670,507	
1846-66					

^aMeitzen, I, 431-34, 467-69.
^bOne morgen (Prussian) equals .63 acre.

^cAccording to Meitzen, these figures for this period are very conservative as not all districts reported.

^dThis represents 27% of the arable land of the state or appr. 10% of the total area.

Finally, a measurable criterion which is closely associated with industrializing economies would be the increasing mobility of a society. With the abolition of feudal service obligations in Germany, a steadily accelerating migration toward urban centers came about (Table 8), although at least one writer accords little importance to the German urbanization before mid-century.⁹² Nevertheless, any sizable migration deserves more than a cursory glance because distance still "measured the genuine isolation of the life" of the people of this era.⁹³ Migration toward urban centers had for this reason a great impact upon the country generally, and the towns and cities specifically.

TABLE 8

URBAN POPULATIONS AND MIGRATION 1750-1858^a
(in thousands)

	Barmen		Berlin		Ffm.	Hbg.	Hnvr.	Munich
	total	mgrts.	total	mgrts.	total	total	total	total
ca.1750	3.8	...	...	...	...	...	...	...
1800	...	...	172.0	...	...	...	...	...
1800-10	16.5	...	....	...^b	40.0	132.0	23.4	45.0
1816-37	...	...	220.0	62.4 ^b	...	...	...	...
1818	19.2	1.3	....	...	...	...	...	...
1820-25	...	...	....	...	43.0	154.5	26.6	...
1840	...	...	331.6	...	...	...	...	...
1843	33.0	5.4	331.9	...	...	...	...	...
1845	...	...	...	17.0	...	...	...	...
1848-50	36.1	0.9	457.9	...	59.0	221.0	41.0	118.0
1858	44.7	5.0	500.0	...	...	...	...	...

^aW. Koellmann, "The Population of Barmen before and during the Period of Industrialization," Population in History: Essays in Historical Demography, ed. by D. V. Glass and D. E. C. Eversley (London, 1965), p. 589; Mauersberg, WirtGesch., p. 78; Mieck, pp. 17-18.

^bAppr. 4,000 per annum.

Historically seen, cities and towns were weakest in their political assertion, the result of having depended upon the security of monarchical authority.⁹⁴ Napoleon's conquests destroyed the last shadows of existence of the Holy Roman Empire, and with the collapse of the Napoleonic Empire, the political influence many cities exerted diminished, although their dependency upon a wider world in which they were located did not. They remained part of a larger social community, a dependency which was increasing in time rather than diminishing.⁹⁵

The destruction of the towns' traditional role was hastened by the lack of political unity of Germany, by Austria's policy of economic isolation after 1815, and by the presence of a pronounced particularism

throughout Germany. Any efforts to reassert their old position within the framework of post-Napoleonic Germany were doomed to failure from the start; the political-economic conditions demanded a new orientation.⁹⁶ They soon discovered that their dependent situation had increased rather than lessened, and that they were not able to control their destiny decisively despite their apparent wealth or their critical economic location; outside forces began to subordinate the towns' politics once more, although they were now of economic origin.⁹⁷ A case in point is that well before mid-century, the traditional sources of supply could not meet the demands of a swelling urban population, making it necessary to improve or enlarge shipping methods and to remove customs barriers. This involved the neighboring states, and on more than one occasion, such intentions met with vigorous official opposition.⁹⁸ This sort of subordination toward outside forces shaped many aspects of the towns' economic and political orientation and, as a result, determined their alliances.

If one now considers that in the towns, the process of the breakdown of traditions and inherited beliefs was accelerated as a result of the influx of people from rural areas, then migration toward urban centers was not simply a matter of cheap labor for the rising industrial enterprises, nor the creation of a fluid labor market because of this. The change was also one of social attitude, eventually having an impact on the rest of the country.⁹⁹ The urban dwellers of the nineteenth century, both old and new, discovered that man is, after all, "capable of living in flocks," and that cities were not "the burial pit of the human species,"¹⁰⁰ although the inhabitants faced experiences which were new and to many contemporaries often baffling to the point of predicting the doom of the whole civilization.¹⁰¹

Demographic changes of Germany went through two distinct stages; to pinpoint their respective exact chronological division, however, is both impossible and for no purpose. First, migration was confined within state boundaries, but as the century progressed, this infra-state movement was replaced by an inter-state movement so that by the end of the nineteenth century, almost half of the German population lived at a place different from that of its birth.¹⁰² Thus, increased mobility of a population seen within the framework of economic and social changes becomes an indicator of a country's historical phase of industrialization as defined earlier. In Germany, a country characterized by political particularism and all that this entails, demographic change was of great consequence. It furthered the gradual disappearance of regional and traditional preferences, an important phenomenon in the light of the subsequent national unification.

We have now examined four major factors which indicate a country's transition toward an industrial economy. These may be summarized as population-production relationship, increased demand for consumer goods, the higher output of agricultural goods (product becomes a direct or indirect means to satisfy demand, but only as a non-capital one¹⁰³), and the accelerating mobility of the society. As surely as these factors tell us that Germany was already involved in the first stages of an industrializing economy and a modern economic growth structure during the first half of the nineteenth century,¹⁰⁴ they also point out that industrialization is both a qualitative as well as a quantitative change of a society. It is for this reason that any one theory which attempts to explain industrialization solely in terms of production, technical changes, or factory organization, fails to do so because industrialization

is all of these and a whole lot more. Thus, we find by mid-century a German society which differs greatly from that of four or five decades earlier. We encounter a new structure of incomes, new status groups, a new educational system with a heavy emphasis on technical and trade schools.¹⁰⁵ Even Alexander Gerschenkron, who speculated that Germany, as a late-comer among industrializing nations, had all the advantages of benefitting from the mistakes of her predecessors,¹⁰⁶ had to admit that any notion of prerequisites of industrialization suggests historical determinism,¹⁰⁷ and that preconditions of industrial developments must necessarily be uniform,¹⁰⁸ a condition impossible to attain in a world which is not.

PART II

THE INSTITUTIONS OF FINANCE:
THEIR DEVELOPMENT AND THEIR IMPORTANCE
AS ACCUMULATORS, CREATORS, AND MOBILIZERS OF CAPITAL

CHAPTER III

THE INSTITUTIONS OF PUBLIC AUTHORITY

In the foregoing chapter, some of the factors which indicated Germany's transition toward an industrializing economy were examined. Clearly, the overall changing economic pattern seems to suggest that capital had found its way into the lower strata of society at an ever increasing and accelerating rate. Obviously, a closer examination of the whole development of capital accumulation and disbursement is warranted. To this end, we begin with those institutions which can broadly be termed state institutions, although state control varied and changed over the years.

With the founding of the Royal Bank (Königliche Giro- und Lehn-Banco) at Berlin in 1765 by Frederic II (the Great), a financial institute was established which continued to exist until its dissolution as the German Reichsbank in 1945. Originally planned as a joint-stock bank of issue, the subscription of shares ran into difficulties almost immediately. Obviously, there existed a great lack of confidence in the establishment of such an institute, be it that the recent experiences of the so-called Law-Banks in France were still too fresh in the minds of the Prussian merchants, or perhaps they simply felt that a military-oriented state was incapable of directing an institute of such importance. On the other hand, there is evidence which suggests that contemporary merchants were reluctant to forego their independence in financial matters as witnessed by the events which led to the establishment of the Silesian and subsequent

agricultural credit institutes five years later.¹⁰⁹

With the end of the Seven Years' War in 1763, the King was determined not only to rebuild the devastated and bankrupt country, but also to place the whole economy on a sounder footing. To this end he envisioned a grandiose scheme which included: (1) reform of the debased coinage by re-institution of the whole monetary system upon the old "Fourteen Thaler Standard,"¹¹⁰ (2) plans to encourage the establishment of commercial and industrial enterprises through direct subsidies or imposts,¹¹¹ and (3) to regulate the whole financial structure through the establishment of a banking institute.

The aims of the bank were clearly defined, "to further the circulation of money, to support commerce by providing credit, and by providing this credit at low rates of interests to prevent usury."¹¹² Subsequent events were to bring out the weakness inherent in the various edicts, orders, and regulations which were designed to define the responsibility and the duty of the institute rather than the strength.

In line with the intent that any commercial enterprises of the state were to be kept separate from the business of the bank, a number of corporations were founded during the years following the establishment of the Royal Bank. Only two remained active, of which only the Königlich Preussische Seehandlungs-Societät, an overseas trading corporation with many domestic interests, is of interest to us. The other corporations were absorbed shortly after their founding by the royal administration and originated a number of state economic departments.

Other important points in connection with the establishment of the bank at Berlin are that the administration of the institute was to remain independent of the state, that the King in the capacity of

protector and guarantor of all the banking business¹¹³ had the right to examine the books and to demand a statement of the affairs of the institute at his pleasure; that the bank's profits were to be transferred to the state treasury; that the bank provide its credit to the public by the issuance of credit vouchers (Giro-Geld) and not by cash; further, that such vouchers were negotiable as money substitutes at any state treasury office or branch of the bank (this limited the use of credit), but that these bills would not constitute claims for specie or paper money. The bank expected a healthy profit from these cashless transactions, and additional profits were to be realized by its lombard (i.e., short term collateral) loan business. Finally, the state was prohibited from borrowing funds from the institute.

The first years of operation were a complete fiasco. The officers installed to operate the institute were largely irresponsible and often worked for their own profit. At the same time, they were able to convince the King for a long time that the failure of the bank's operation was to be sought in the unwillingness of the merchants to make use of the offered services.¹¹⁴ With the assumption of the directorship of State Minister von Hagen in 1768, the bank began its first expanding period. Conscientiously following the original concept of the statute, the bank enjoyed the growing confidence of merchants and public alike, and the business volume as well as the deposit amounts increased at a high rate. Furthermore, the decree of July 18, 1768, stipulated that all state agencies such as the Upper and Lower Justice Collegia, the Trust Collegia, and the magistrate courts, the War and Domain Chambers with their subordinate offices, deposit their cash reserves and trust moneys with the bank on interest-bearing accounts.¹¹⁵

Shortly after von Hagen's death in 1771, the bank rapidly assumed a different role from that conceived originally. To serve commerce and industry became a secondary consideration. The giro-transactions were discontinued, and as the bank's deposit business made rapid progress (Fig. 3) even to the point that it was considered to be getting too big, the whole system of credit had to be re-evaluated. These two developments, increased disposable capital and withdrawal from commercial loan business, did not complement each other. On the other hand, the state, especially after the decree of July, 1768, expected increased profits. A subsequent order instructed all charitable organizations, hospitals, and schools to make use of the bank's facilities.¹¹⁶ The institute was able to realize until 1805 an accumulated profit of over nine million thaler (Appendix C). In short, the responsibility of the bank toward the state became so extensive that one could now describe it as the official monetary institute of the state. In the meantime, the rate of interest payable on deposits was reduced to $2\frac{1}{2}$ per cent per annum, and two years later to 2 per cent per annum.¹¹⁷

The origin of this development can be found in the founding charter of the bank. The state in its function of prime motivator attempted to force the merchants to avail themselves of the bank's services; in fact, a number of regulations stipulated fines to be levied in case of resistance.¹¹⁸ Although there was an original reluctance, the private merchants made increasing use of the services.¹¹⁹ Nevertheless, credit and money circulation is not something which can be decreed. The bank's bills of exchange and cash vouchers could not be negotiated in lieu of cash, and this restricted their use as money substitutes, although they certainly made the payment of taxes more prompt. The secrecy which surrounded the

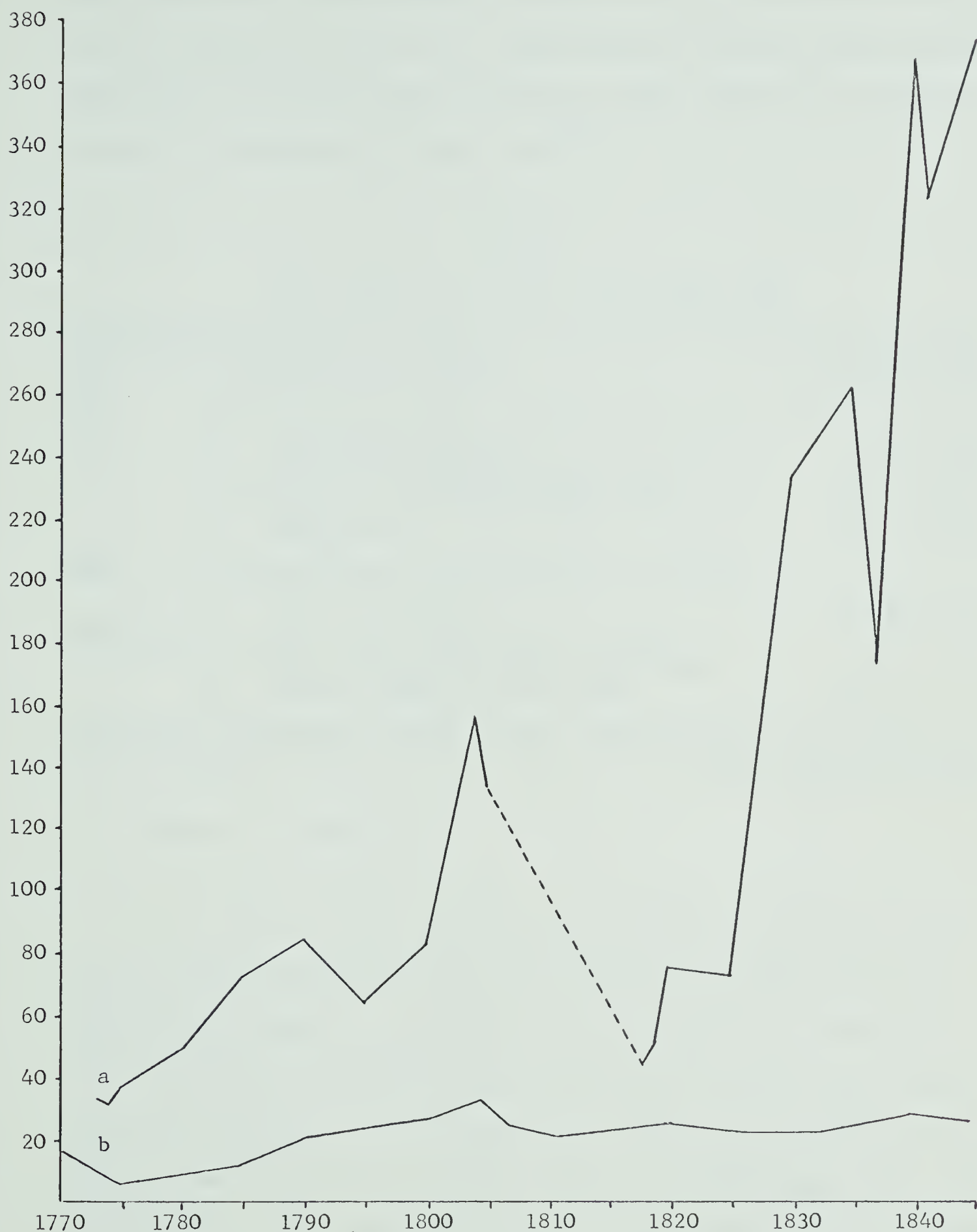


Fig. 3.--Business of the Royal Bank of Prussia (in million of thlr.).
 (a) Total volume of transactions. (b) Total amount on deposit. See also
 Appendix C.

bank's business activity probably originated out of ignorance of proper business principles, but as the century drew to a close, it was increasingly used to ease the state's demands for credit (Table 9), a practice contrary to the charter of June, 1765.¹²⁰

TABLE 9
STATE LOANS AT THE ROYAL BANK UNTIL 1818^a

1786-1788	Advances to the state	412,614 thlr.
1797	State defense loan	9,492,537 thlr.
1807	1. Loan to the Assn. for the Assistance of the Poor, Vienna	9,797 thlr.
	2. Loan to the General Postal Fund . . .	38,150 thlr.
	3. Payment to the Pomeranian Provincial Fodder Fund	49,174 thlr.
1808	State assumed the obligations of General Graf von Tauenzin	16,897 thlr.
1808-1811	1. Agio loss (devaluation of assets) . .	21,653 thlr.
	2. State assumed the debt of the West- phalian domain Schmeitlingen	555,236 thlr.
1815-1818	State loan @ 5% per annum; repaid 1820/22	3,176,300 thlr.
	TOTAL	13,750,705 thlr.

^aHübner, I, 26-27.

In 1798, the bank's business came under the presidency of Graf von der Schulenburg-Kehnert who was also appointed Inspector-General (General-Contrôleur), i.e., manager of all financial and commercial state institutions not already part of the general administrative organizational structure. In other words, the affairs of the bank as well as those of the royal overseas trading company, the Seehandlung, came under one direction. This step constituted the final break with the original charter. Henceforth, the bank was operated solely for the benefit of the state; all other considerations were relegated to second position.

The shift in the emphasis of importance was made relatively easy by the stipulation of the original charter and the subsequent regulations, as odd as this may be at first appearance. The bank had from the beginning to transfer all profits to the state treasury and to pay interest on all state trust deposits. Taken in connection with the great amount of deposits the bank had to accept, further, with the reluctance of the private sector of the economy to avail itself fully of all the services the bank had to offer, and finally, with the preference of the president of the institute, Graf von der Schulenburg-Kehnert, to concentrate the credit activity on agricultural mortgage rather than commercial investment,¹²¹ it can easily be seen why the state's secret instruction to the president of the bank to encourage and favor credit applications from landowners residing in the newly acquired Polish, now the "New-Prussian" territories,¹²² was so readily accepted. After all, the state's interests were at stake, for the support of the Polish landowning elite was essential to the political situation in this part of Europe. In the light of this, no true servant of the state, it was argued, but especially no citizen could refuse such a patriotic deed.¹²³ Therefore, there was no need to inform the public. As a matter of fact, when the state was forced to make this business public decades later, it still constituted a great embarrassment to the government, as we shall see.

More specifically, this "patriotic deed" had dire consequences. While it was argued that the state was in its right to make such a request since it guaranteed not only the bank's correct operation but also the security of the public deposits, and that any losses would only be in form of reduced profits of the bank and hence less money for the state treasury, public trust was violated. Those deposits which,

because of their very nature, had to be kept liquid, namely the various pension and orphans' funds, were now invested in long term mortgages.

The New-Prussian mortgage transactions were mainly made at the Elbing branch office of the bank which was, at the time, under the management of von Struensee, the brother of the state minister. After the mortgage business had taken on great proportions, he was ordered by the head office to curb these activities and to use a more discriminate judgment when approving the applications of the Polish landowners, but to no avail. Two years later, in April of 1806, the Reichsminister von Stein informed von Struensee in no uncertain terms that henceforth, he would be liable for losses unless he stopped accepting mortgage applications forthwith.¹²⁴ Apparently, even this order was disregarded until the end of the year.

Struensee's broker was the merchant Jakob Levin Arge. Out of a total of 5,058,975 thaler invested in agricultural mortgages in the Polish provinces, he transacted 4,886,865 thaler. The bank at that time was already involved in a number of suits against some landowning debtors because they were either unwilling or unable to meet the terms of the mortgage agreement. Before anything could be settled, Prussia was defeated at Jena.

In defense of von Struensee's actions and, for that matter, also similar irregularities practiced by other branch directors, it needs to be said that these bank officials received by way of compensation for their services commissions, a percentage of those charges made to users of credit or of other bank facilities. Assuming that the head office reverted to this remunerative scheme in order to promote an increase in the bank's lending volume, the actions of von Struensee, at least in the

beginning, were quite in accord with the bank's intentions. It was only after the state required a larger amount of cash than its share of the bank's profit could provide that it had second thoughts about the whole matter. It remains doubtful that originally, any distinction as to the risk the individual potential mortgagor represented was considered. Furthermore, almost all influential bank and government officials agreed that lombard credit was an inconvenient and costly business because the merchandize pledged as security needed to be guarded constantly by bank clerks.

In any case, the total amount of money loaned to the Polish landowners amounted to approximately 9.25 million thaler by 1806. Through the Bayonne Convention of May 10, 1808, which, among other things, declared all Prussian assets in the Duchy of Warsaw confiscated (according to Prussian officials in violation of the Tilsit Peace Settlement of the previous year), the Royal Bank lost two-fifth of its total assets.¹²⁵ Technically, the Prussian state was to be repaid as was agreed in Vienna in 1815, however, the governments which became heir to the Duchy of Warsaw at this time, namely Russia and the new Kingdom of Poland (Austria's acquisition was free of Prussian investment), were either unwilling or unable to comply with the Vienna settlement. Incidentally, except for the 3 million thaler which, as mortgage assets, were returned to Prussia in 1815, the state made demands of 24.5 million thaler, at that time a staggering sum indeed. The largest portion had to be written off over the years, but the commercial investments of the bank, contracted before Prussia's defeat, were all recovered without capital or interest losses.¹²⁶ Unfortunately, these represented only a small portion of the institute's outstanding assets.

At the end of 1817, a year of widespread crop failure and economic crisis, the whole finance ministry was ordered reorganized. The bank's administration was to be severed from that of the government.¹²⁷ The assets of the institute then amounted to 28.1 million thaler, the liabilities to 27.2 million thaler. Thus, an official profit of a little over 0.9 million thaler was registered.¹²⁸ Unfortunately, the real picture was somewhat different from that shown by the books.

Among the bank's assets was an entry of 15.3 million thaler which did not earn any interest for the benefit of the institute. On the other hand, liabilities to the tune of 26.3 million thaler were interest bearing; these represented mostly the public and private deposits (Fig. 3 and Appendix C). Furthermore, of the above listed assets, 7.8 million thaler were officially written off in December, 1845, as irrecoverable losses, and a further 0.3 million thaler were removed from the asset column as assets of questionable value on the same date. Therefore, not a profit of 0.9 million thaler, but rather a deficit of 7.2 million thaler or 26 per cent of the total liabilities represented a truer picture.¹²⁹ Obviously, the bank had to keep its operational affairs secret (at least until the loss was made good) because, as Niebuhr put it, it had to retain the public's trust. "With a full confession of its dealings of the past, the institute would have endangered the first basis of its activity, namely its credit."¹³⁰ To this end, it was decided and ordered that the affairs of the bank be separated from those of the finance ministry and any other government department so as to enable the new directorate to manage its affairs as it saw fit, to reestablish and further the credit business, and to restore the public's confidence. In other words, the bank was assuming the function its founder had in mind.

On December 2, 1817, Karl Ferdinand Friese became the new head of the bank, responsible only to himself and the King. That a major reconstruction period had begun nobody apparently doubted. To the credit of this able official, the public's confidence in the institute was soon restored, the bank's business activity increased at an unprecedented rate, and the reserves were beginning to show a healthy picture (Appendix C). However, during his presidency and that of his successor, Christian von Rother, many of the bank's policies came under heavy criticism.

These events form part of the overall economic development of post-Napoleonic Prussia. So great was the influence this state exerted upon the rest of Germany and abroad by its greater proportion of territory and population¹³¹ that contemporaries charged Prussian economic innovations to have been "anti-German".¹³² More likely, Prussian policies exposed the weaknesses inherent in the economic and fiscal systems of the various German states and the selfish interests many rulers exhibited when they kept on insisting on "divine privileges of customs and tolls."¹³³

The Royal Bank of Prussia was by far the largest banking institute in Germany, but not the only one of its kind. There were also the Ducal Credit Institute of Brunswick (Herzogliches Leihhaus in Braunschweig) and the Royal Bavarian Bank at Nuremberg (Königlich Bayerische Bank zu Nürnberg).

The Brunswick bank was founded in 1765, but even with the revised charter of 1842, the institute never gained more than a local importance. The Royal Bavarian Bank was founded in 1780 as the Court Bank of the Margraviate of Ansbach (Markgräfllich Ansbach'sche Hofbank) for which not the state but rather the sovereign endowed capital. The original idea, proposed by the Ansbach minister Benckendorff, called for a commercially

oriented institute to collect all non-circulating monies in order to facilitate its circulation, to administer all commercial enterprises of the sovereign as well as the state, to foster commercial connections with other German states, and finally, to make credit available to entrepreneurs of industry and commerce. However, as might be expected, the bank operated initially as an institute for the sole benefit of the margrave. In 1780, it was allowed to enlarge its functions while at the same time a shift of the purpose of the institute was taking place. Lombard credit was made available to the private sector of the economy, usually at six per cent per annum. Every person of good character, be he a resident or otherwise, a Christian or a Jew, could make use of these facilities.¹³⁴ After 1785, the bank accepted also orders for drafts payable outside the margraviate.

Unfortunately, the bank could not develop into a sizable institute since Ansbach lacked commerce and industry. Nevertheless, in spite of some early losses and some irregularities of the personnel, the affairs of the institute remained solid. At the time the country was ceded to Prussia in 1791, the bank's notes had enjoyed great popularity; 500,485 gulden (approximately 285,990 thaler) were in circulation (Table 10).

The institute continued to operate under the name of Royal Prussian Bank of Franconia (Königlich Preussische Bank von Franken). The head office of the bank was transferred to Fürth in 1796. However, before it was decided to continue the operation, the Prussian government had planned to withdraw all the deposits made by the various state agencies for the purpose of transfer to the Royal Bank in Berlin, and to let the other business slowly die out.¹³⁵ The business increased contrary to all expectations, without the bank enjoying any monopoly or other royal

guarantees, so that by the turn of the century (the economic crisis of 1799 by-passed the affairs of the institute), the royal account amounted to 205,290 gulden, mostly in the form of profits (Table 10). After this, there was no question as to the future of the institute.

TABLE 10
BANKING BUSINESS AT ANSBACH/FÜRTH 1780-1851^a
(in gulden^b)

Year	Liquid Reserves and Deposits	Bus. Vol.	Credit Assets	Notes in Circulation	Profits
1780 ^c	. . .	. . .	. . .	. . .	254
1784	. . .	. . .	. . .	. . .	2,199
1788	. . .	. . .	. . .	. . .	11,340
1791	. . .	. . .	. . .	500,486	15,934
1792 ^d	817,464 ^f	. . .	817,465 ^f	. . .	. . .
1796	. . .	. . .	. . .	. . .	72,193
1799	2,884,066	. . .	. . .	. . .	111,450
1806 ^e	441,495	36 mill.	500,000	1 mill. ^g	. . .
1851	. . .	60 mill.	. . .	. . .	. . .

^aHübner, II, 46; Poschinger, I, 157-69.

^bConversion: 1 thlr. equals appr. 1.75 fl.

^cAnsbach'sche Hofbank (1780-91).

^dKgl. Preussische Bank von Franken (1791-1806).

^eKgl. Bayerische Bank (after 1806).

^fCreditors owed 735,377 fl., in addition to 82,188 fl. of questionable credit assets. Deposits for this year amounted to 702,287 fl.; further, 115,177 fl. were earned capital, i.e., 2,517 fl. debt write-off, 82,188 fl. questionable debt assets, and 30,472 fl. capital reserves.

^gThe break-down was as follows: 750 fl. in bank notes, and 250,000 fl. in bonds (Bankschuldscheine).

With the occupation of French troops in February, 1806, the bank's affairs remained unsettled for some time. Five months later, the institute was transferred to the Bavarian crown and became known as the Royal Bavarian Bank.

An institute of more far-reaching influence in German economic affairs was the above mentioned Seehandlung, founded as part of Frederic's II ambitious scheme of reconstructing the Prussian economy after the Seven Years' War. According to its charter, the institute's prime purpose was to establish the maritime trade, but it soon became, quite in accordance with the economic practices of the state and the need of the country, heavily involved in industrial enterprises throughout the country.¹³⁶ During the ministry of von Struensee, the Seehandlung developed into a financial institution, largely in direct competition with the Royal Bank's activities.

The original share capital amounted to 1.2 million thaler, of which only 300 shares each of 500 thaler (total of 150,000 thaler of the original share capital) were issued for sale to the public. In other words, state interests in the institute's affairs were considerable from the beginning. In 1806, the Seehandlung had borrowed capital amounting to 17.8 million thaler, all of which was used to meet state obligations in foreign countries. With the defeat of Prussia in 1806, this obligation became delinquent.

After 1782, the activities of the corporation were greatly broadened, and branches were opened at Hamburg, Elbing, Amsterdam, and Warsaw for the purpose of attracting and earning foreign capital. These operations were by and large successful, except for the institute's investments in Polish agricultural bonds. By the end of the century, the trading of bills of exchange, its lombard credit operation at Warsaw, and the discounting of notes had reached sizable proportions (Table 11), so much so that the Minister Freiherr von Stein in his report of April 8, 1806, complained that the corporation's activities were too much in competition

with those of the Royal Bank and therefore detrimental to the state's economy and the public's confidence in the government's fiscal policies. Specifically, he felt that too much capital was withdrawn, that the trade of notes and bills of exchange became less profitable, and that the See-handlung's creation and circulation of money substitutes in form of its own negotiable deposit receipts (Tresorscheine) upset the precarious balance of the country's real quantity of money.¹³⁸

TABLE 11
BUSINESS OF THE SEEHANDLUNG 1772-1805^a
(in thousands of thaler)

Year	Lombard Assets ^b	Interest earned	Trade of Notes		Deposits ^d
			Ann. Vol.	Profit	
1772	34,260	1,676	. . .	. . .	. .
1780	. . .	. . .	. . .	. . .	0.1
1782	. . .	. . .	299,466	34	. .
1783	50,745	3,494	728,786	2,467	. .
1784	37,995	3,914	1,319,699	19,342	. .
1785 ^c	58,725	3,652	2,065,020	15,896	1.7
1790	. . .	. . .	. . .	. . .	2.0
1795	. . .	. . .	. . .	. . .	3.0
1800	. . .	. . .	. . .	. . .	10.0
1804	. . .	. . .	. . .	. . .	21.0
1805	. . .	. . .	. . .	. . .	20.0

^aPoschinger, I, 145-46; K. Schauer, Die Preussische Bank: Unter Benutzung amtlicher Quellen (Halle a.S., 1912), p. 57.

^bIn the office at Warsaw; the interest charged was 8% per annum.

^cIn 1786, there were serious considerations to liquidate the corporation because of the extensive fraud committed by its first director, von Görne. Only the 5 mill. thlr. investment which brought regular interest profits stopped the committee from liquidation procedures.

^din million of thaler.

With the defeat of Prussia by Napoleon's armies, the state was faced with an obligation to the institute it could not meet. Furthermore, many assets of the society were lost because of the territorial adjustments.

The remaining liquid assets were exchanged by the state with State Treasury Notes (Staatsschuldscheine), a form of promissory note which was placed on the market. As we have seen, at that time, all liquid assets of the Royal Bank were already depleted. While the bank was becoming inactive except for collecting taxes and dues on behalf of the state, the Seehandlung was obliged and probably much better suited to assist the state in its financial operations. The role of the Seehandlung henceforth was to act as the state bank, a development confirmed by the edict of January 17, 1820, of which more will be said in connection with the reorganization of Prussia's finances after the Napoleonic era.

The above discussed institutes were, however, not so much state banks insofar as they had obtained from the state all of their operating and reserve capital, or that all their activities were conducted solely for the benefit of the state. It cannot, of course, be denied that the state controlled to a great extent the affairs of the institutes for its own benefit. After 1815, efforts were made to lessen this role and to bring the activities on the institutes into accord with the need of the country. Napoleon's heritage to Germany, Prussia's economic hegemony over central Europe, made the Royal Bank at Berlin and the Seehandlung the most important institutes insofar as capital accumulation, creation, and circulation is concerned. Not because these institutes were so active in these fields--their inactivity was of great concern to the industrial and commercial entrepreneurs of the post-Napoleonic era--but rather because they determined the economic and financial policy of the state. Their close association with state interests, in spite of legislation testifying to the contrary, was largely responsible for any misplaced economic planning. The other financial institutes which existed

throughout Germany and which functioned in much the same manner hardly provided any counterbalance to this influence as they never gained any great influence outside their immediate trading areas.

CHAPTER IV

THE AGRICULTURAL CREDIT INSTITUTIONS

The importance of agriculture in an industrializing society is unquestionable. Any policy decision, be it monetary or otherwise, would have to take agricultural interests into consideration. However, to conclude that economic expansion was deliberately retarded because the Prussian Junkers were opposed to industrialization on principle (their status as the leading section of the society was to have been threatened), and further suggesting that these landowners controlled all or most policy decisions of Germany's most powerful state and thus affected the rest of Germany adversely,¹³⁹ means to neglect a number of important facts which make this generalization questionable. One cannot overlook the widespread concern of influential Junker circles about the backwardness of agricultural mortgage credit associations, the Landschaften in particular, as they existed during the 1830's and 1840's. The most common complaints centered upon the customary low assessment of agricultural properties (reportedly having been as low as one-third of the actual market price) which tended to depress their values, and in consequence having been detrimental to agricultural credit in general. Furthermore, the processing of applications was often painstakingly slow, sometimes taking as long as three years before the transactions were completed.¹⁴⁰ The cause for all this was thought to have been the widespread lack of capital which in turn was considered to have been the result of extensive railroad investment, a point which needs to be qualified. Not that the

construction of railways per se was opposed by the landlords. Many saw the advantages of greater accessibility of markets provided by them. Rather, it was felt that the government did not respond to the needs of credit and thus, by its policy of capital restriction, reduced the level of national wealth.¹⁴¹ "It is difficult to understand," wrote the Pomeranian aristocrat and influential financial critic, Ernst von Bülow-Cummerow, "that the government of Prussia, a state where intelligence supposedly had become common property, consistently failed to realize those projects circumstances are demanding, namely the reorganization of the whole system of mortgage credit; it even refuses to consider any submitted proposals."¹⁴² This strong criticism was by no means the opinion of a single person, and it suggests that the interests of the landowning elite were not always the prime considerations of the Prussian policy-makers.¹⁴³

On the other hand, it hardly seems to have been coincidence that a report commissioned half a century later by the British Board of Agriculture and Fisheries could conclude, "In no modern State does organized effort for safeguarding and promoting the economic interests of agriculture appear to have been so persistent and so successful as in Germany."¹⁴⁴ Indeed, an economy which until mid-century was primarily agricultural in character both in terms of employment and investment (Table 1), yet showing definite signs of changes in the basic economic structure and the attitudes of the population long before this, could hardly have ignored agricultural credit demands. True, the general lack of capital had affected these types of financial institutes as it had any other credit granting establishment. Nevertheless, they played an important role as agents of capital creation and mobilization.

German agricultural credit institutes (Appendix D) fall into two broad categories, namely those which granted credit without requiring from the debtor a declaration as to the purpose of the loan, and those which required such a declaration. Into the first group fall the land credit associations (Landschaften), the state, provincial, and district mortgage credit banks (Staats- and Kommunal-Darlehnskassen), the joint stock mortgage banks (Hypothekenbanken), and the savings banks (Spar-kassen). The second category includes those institutes which granted funds for land improvement (Meliorationsfonds), the rent-charge banks (Rentenbanken), and the provincial aid banks (provinziale Hilfskassen).

The land mortgage credit associations were organized on a cooperative basis and procured for their members loans by the issuance of bonds secured by mortgages of rural property, with the exception of the Württemberg Credit Association which issued bonds on urban properties as well. The organizations were non-profit making enterprises, their accumulated assets designated to cover eventual deficits. All of these associations were highly organized bodies of borrowers with collective guarantee for obtaining capital from third persons. Through their practice of issuing bonds which have been secured by mortgages on the properties of all members, they created securities which could be realized at any time in the general market, and which were consequently far superior to a mere individual mortgage security. Even during the difficult years of the Napoleonic era, these institutes continued to hold their own, although they were not able to escape submission to the Indult Legislation of May 19, 1807, and that of subsequent years restricting the legitimate demands of creditors.¹⁴⁵ However, all obligations were eventually met,¹⁴⁶ and the associations could report having had few if any losses,¹⁴⁷ a remarkable record indeed.

The notations of the agricultural mortgage bonds at the Berlin Stock Exchange between 1807 and the end of our period reflect the confidence the public placed in them (Fig. 4 and Appendix E). If one compares the range of values these were traded at with those of the State Treasury Bonds (Staatsschuldscheine), one immediately notices that even during times of economic uncertainties, the former retained a higher market value. Immediately after the war, the Silesian, the Kur- and Newmarkian, and the Pomeranian bonds were traded above par. The decrease of trade value after 1840 coincided with the conversion of the interest rate from 4 per cent per annum to $3\frac{1}{2}$ per cent per annum as was decreed by various cabinet orders,¹⁴⁸ with the increasing popularity of industrial stock (Table 1), with a general shortage of investment capital, and finally with the economic depression. However, one ought to note that the annual average trade value of the two types of stock during the crisis of the 1840's remained relatively high.

The issuance of agricultural mortgage bonds constituted, in effect, a creation of money substitutes. During the period under investigation, their circulation in monetary values increased from 53.9 million thaler in 1805 to 123.5 million thaler fifty years later (Appendix F), or by a total of 69.6 million thaler. Considering that the largest increases of these money substitutes entering the economy belonged to the 1830's, and that from then on the increase remained fairly steady except for a short reprieve during the economic crisis of the 1840's, we must concede that the contribution of the agricultural credit institutes was favorable to the economic development of the country indeed. Of course, the collective guarantee of the bonds and everything this implied had made these a favorite investment. Thus, a substantial portion of the value of rural

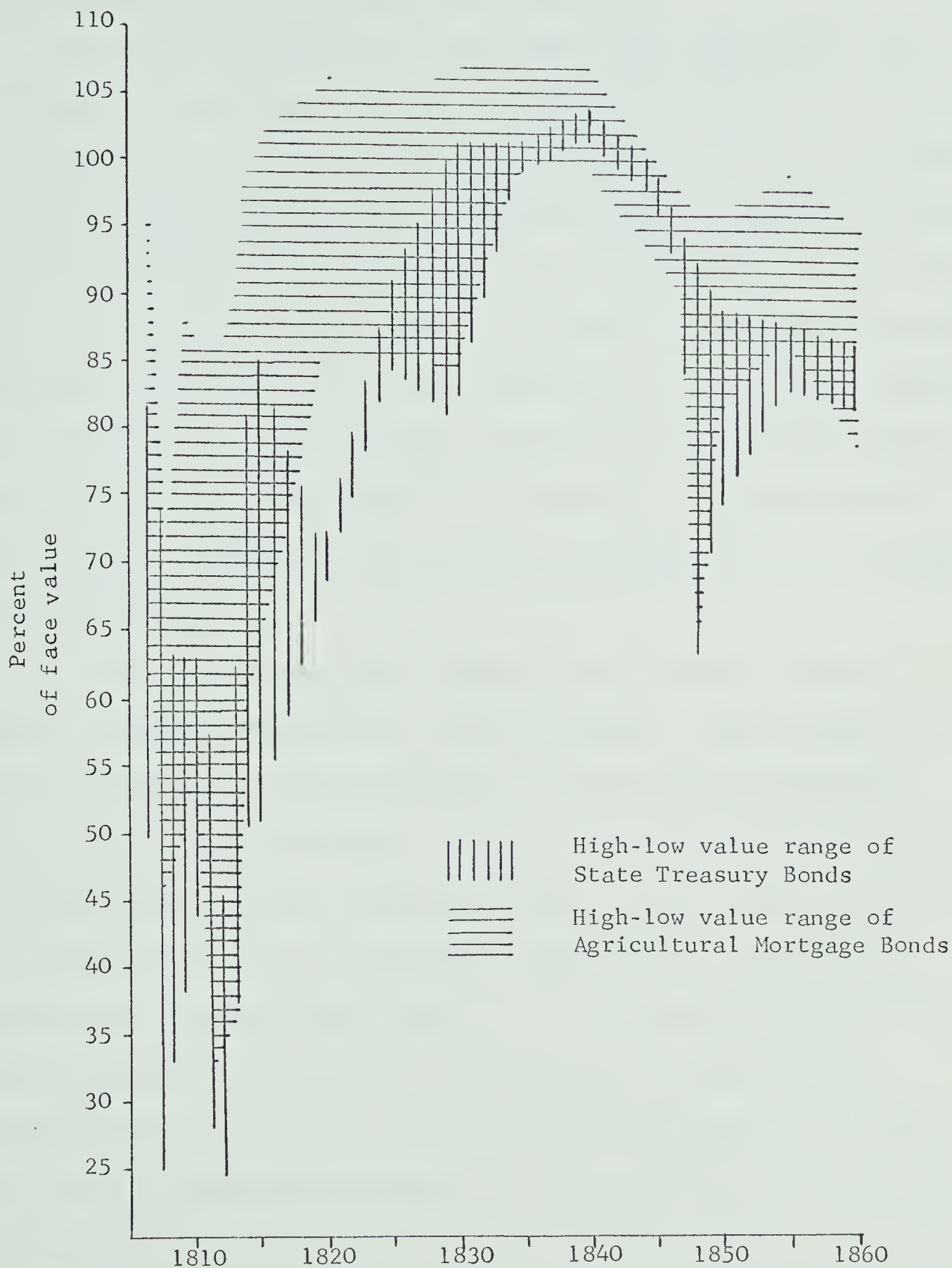


Fig. 4.--Trade of Mortgage Bonds and Prussian State Treasury Bonds at the Berlin Stock Exchange 1807-1860. See also Appendix E.

property could be mobilized as capital which, in the form of bonds, flowed into the general system of negotiable securities.

The land mortgage credit associations could trace their beginnings to Frederic II (the Great). In order to place the economy of agriculture on a sounder footing, he decreed July 9, 1770, that all large and small landowners within a province were to become members, regardless of whether or not they wished to avail themselves of the credit opportunity. Their respective provincial estates were to guarantee the associations' bonds.¹⁴⁹ Consequently, upon all associations founded prior to 1788, with the exception of the Kur and Neumark Manorial Mortgage Credit Institute founded at Berlin in 1777, collective liability was imposed, a necessary measure to curb the great indebtedness of landowners by making their credit standing more favorable.¹⁵⁰

To everybody's surprise, foreign capital was soon attracted because the bonds represented an unusual security. The government, in flustered response to this unforeseen and unprecedented development, attempted out of fear of foreign influence in domestic financial matters, of possible uncontrollable speculation, and of loss of specie through the payment of interests, to stop this attraction and permitted the associations to recover their bonds by offering 3 per cent agio.¹⁵¹ Whatever the success of this step, six years after the founding of the Silesian association, in 1776, the basic rate of interest was reduced from 5 to $4\frac{2}{3}$ per cent per annum, and two years later, to 4 per cent per annum.¹⁵²

The associations founded after 1790 were constituted to restrict collective liability to borrowing members only. This was a step taken after experience had shown that the older associations were able to

accumulate sufficient reserves through the sinking funds of the mortgagors and never were forced to call upon their members. By the middle of the nineteenth century, the system of securing mortgage bonds upon specific properties with concurrent guarantees by the associations was gradually abandoned in lieu of bonds representing claims upon the association only. In other words, holders of bonds had no right against specific real property; they could only recover from the associations.¹⁵³

A highly organized registry system was devised assuring that there were never more bonds in circulation than actually covered by mortgages. This prevented any credit operation by the associations which might result in a weakening of the security of the bonds. The title registry was open to the public, and the operation of the associations (Fig. 5) were supervised by either a control commission or, as was to become the case after mid-century, by an elective directorate and a supervisory board. Furthermore, the associations were also supervised by the state, usually through an appointed royal commissioner, often being the provincial president, or in non-Prussian German states, a commissioner within whose jurisdiction agricultural affairs were placed. Finally, syndics, non-voting members of the associations, directed the administrative body. These were permanent and salaried officials whose sole occupation was to manage the business of the associations, to carry through all necessary legal formalities, to adjust claims, to cancel mortgages, and so on. These officials had, in order to qualify for this post, to pass a state examination the same as candidates for the office of judge or magistrate.

Anybody being able to meet the conditions imposed by the articles of the associations became eligible for credit. On the other hand, applications could not be refused by the associations who did qualify.

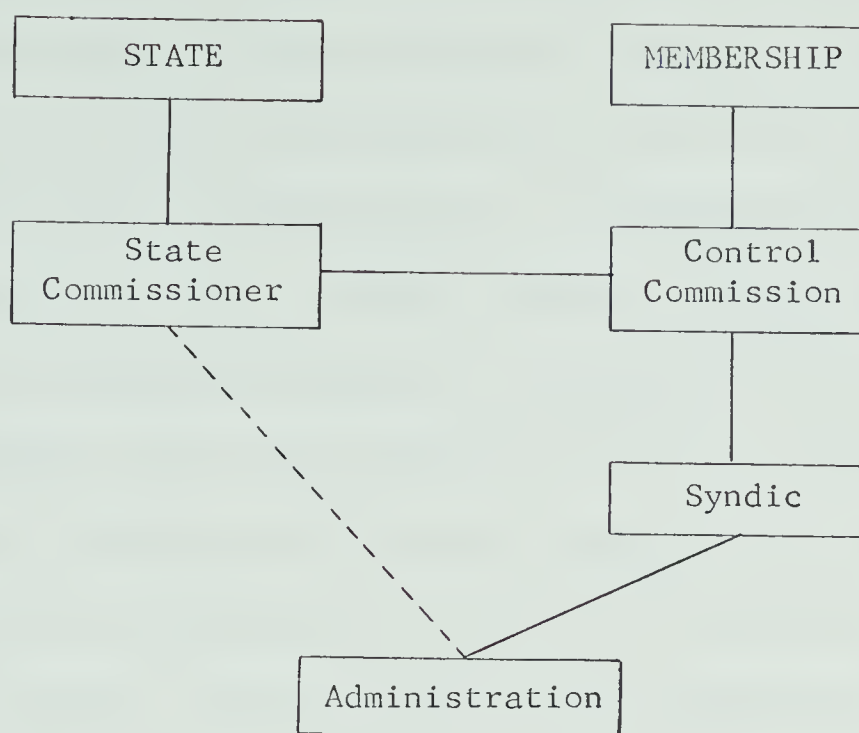


Fig. 5.--General structure of management of land mortgage credit associations (Landschaften).

The loan, as long as the borrower continued to meet his part of the agreement, could not be recalled unless the mortgaged property deteriorated in value due to mismanagement. Further, once payments were in arrears, the associations reserved the right of compulsory management of the property and its sale if conditions warranted this step. The associations were, however, not allowed to acquire their own property in this way.¹⁵⁴

Usually, before it came to seizure of the property, the associations increased the rate of interest on the overdue balance (the combined rate could not exceed 5 per cent per annum), and a further lien, usually in form of a second mortgage, was entered against the title of the property.

Contrary to the widespread assumption that these credit associations catered exclusively to the wishes of the Junkers who showed no interest in credit facilities for their former tenant farmers,¹⁵⁵ we find a relatively early awareness of the needs of the smallholder,

potential or otherwise. Granted, the original associations only admitted to membership owners of large and manorial estates. However, already during the first decade of the nineteenth century, the small farmer obtained credit rights and opportunities, a development which gained impetus after the Napoleonic Wars. The East Prussian Association was the first to remove its membership eligibility restrictions.¹⁵⁶ In 1808, it made credit available to any rural proprietor whose real estate was assessed at 500 thaler, usually around 50 acres in size since the average assessment per acre was approximately 10 thaler.¹⁵⁷ In 1849, the Silesian Association created a special department for smallholders which issued bonds secured by individual mortgage claims of like amounts, and their respective properties remained unincorporated (Appendix F). The association serving the districts of Hanover and Hildesheim lent up to one-half of the valuation of the property, making loans in cash instead of in negotiable bonds. However, these were made only to properties of "substantial value," the minimum loan being 200 thaler, much the same as was provided by the Hanoveranian Landeskreditanstalt (Appendix D).¹⁵⁸

How misleading a statement implying inaccessibility to credit for small farmers can be is illustrated by the regulations imposed by the Posen Mortgage Credit Association after the institute extended its service to the smallholder in 1857.¹⁵⁹ The charter stipulated that anybody holding title to a rural property located within the province of Posen could obtain credit from the institute. However, the minimum tax assessment of the property had to be 5,000 thaler. This restriction was to have excluded virtually every smallholder in this province, but then one must remember that tax assessment figures and actual value of the property are two different things. The assessment in Posen was based on the potential productivity of the holding. To this end, every parcel was assigned

to a specific group of a soil chart, each of which had had attached to it a monetary value.¹⁶⁰ Since the province contained excellent as well as extremely poor soils, generalizations must be made with caution. However, the greatest portion of arable land seemed to have fallen close to the tax assessment value of 80 thaler per morgen, the assessment scale ranging from 5 thaler per morgen for totally unproductive land to 150 thaler per morgen for the best soils.¹⁶¹ A correlation of the assessed value and the actual market value of agricultural property for the period between 1850 and 1860 indicates that the assessed values were approximately twice as high as the market price. The reason for this was that buildings, dwellings, drainage systems, accessibility to markets and other items all of which influence the market price and have a bearing on the productivity index of the farm could not be assessed through the means of the soil chart. It appears that in order to correct this discrepancy, assessors simply grouped property into higher categories of the soil chart. In addition, the smallholders, at least the majority of them, tended to settle close to urban centers, partly because they hoped to supplement their farming income by hiring themselves out (in which case they were not able to obtain credit from the association), or because they raised products specifically designed for this market such as vegetables, fruits, fowl, and dairy products. Usually, the best soils can be found near urban areas, especially since towns were located close to navigable rivers or the like, providing the nearby residing farmer with good pasture lands. Consequently, the properties of these smallholders were somewhat of a higher value than elsewhere.¹⁶² It is for these reasons that in most cases, the minimum assessment value of 5,000 thaler per holding could represent as little as 60 morgen, or 36 acres. On the other hand, marginal land, and therefore unproductive farming units, were generally excluded because of

the above considerations. Even if credit would have been made available to these farmers, only in rare cases would it have improved their economic condition.

After mid-century, the distinction between small and large landowners were beginning to be ignored by the newly established credit associations catering to the rural property owner, a development much to the credit of "dangerous careerists" like Bülow-Cummerow and others¹⁶³ who tirelessly pressed for reforms of the whole credit system and who insisted that all agricultural mortgage credit associations extend their service to all propertyholders, rural as well as urban.¹⁶⁴ As it were, provisions for the credit availability to these groups of the society were also made at an increasing rate by institutes specifically designed for this purpose.

Besides the land mortgage credit associations, the state and district mortgage credit banks (Staats- and Kommunal-Darlehnskassen) played an important role in the mobilization of capital through their activity as lenders to landowners (Appendix D). However, these institutes, their liability having been guaranteed by the public authority of the area in which they operated, originated in the non-Prussian states of Germany. Two main reasons account for this. Firstly, the Prussian government was adverse to guarantee the liability of any institute which contracted loans unlimited in their amounts. As a matter of fact, the Prussian constitution of 1850 specifically forbade state responsibility to such, thus forcing the government to transform the state-guaranteed banks of the territories annexed to Prussia during the course of the nineteenth century into institutes under communal guarantees of their respective districts (Regierungsbezirk) or provinces. Secondly, these

banks were specifically designed "to give communes and landowners the means of redeeming old debts, for redeeming servitudes [rent charges, tithes], and for purchasing property by procuring for them the necessary capital at moderate interest and without the costly interposition of third parties."¹⁶⁵ In other words, these banks were established in areas where no other suitable mortgage credit institution existed, namely in parts of central and northwestern Germany. Their primary concern was to the medium and small farm owner which was not numerous in eastern Germany. They served only those farmers who could not obtain credit from other sources. The latter point is important, for when the Hanover Provincial Credit Institute was founded in 1840, three land mortgage credit associations already existed there. They catered mostly to the larger owner and were located at Celle, at Stade, and Hanover-Hildesheim (Appendix D).

Usually, long-term credit was made available to landowners of the district in which these institutes operated, and on the security of property situated in this particular area. However, three exceptions existed. The banks at Bauzen, Altenburg, and Gotha all contracted loans outside of their immediate operative area, and the loans were, except those of Altenburg, secured by property.

The oldest institute of this type was the bank of Brunswick. First established as a savings bank sponsored and supervised by the ducal government, it reverted in 1832 to a state credit institute. This operative transformation, however, was of little consequence other than that the bank now also accepted as deposits public trust money. From the beginning of its operation in 1765 it loaned capital secured by agricultural property. On the other hand, the bank at Altenburg was originally a private loan bank and became a state-guaranteed institute by the orders of 1818 and 1837. All other institutes were founded as both deposit

banks and credit institutes under the guarantee of a public authority.

The working capital was obtained from the issuance of bonds, all of which were recognized trust securities, from deposits, from various accumulated funds, and from grants and loans made by the state. Contracted loans were generally not subject to recall. They were repayable in small annual installments, and were contracted at moderate rates of interests, usually from 3 to $4\frac{1}{2}$ per cent. These gave the small or medium farmer similar advantages in obtaining long term credit as was the case with the large landowner who was served by the Landschaften. On the other hand, the principle of compulsory reduction of debt by annual payments to a sinking fund had its beginning in the institutes of Prussian origin and served as a model to the various cooperative credit associations founded between 1820 and 1840. Furthermore, there existed a relative freedom from excessive indebtedness as mortgage debts could be redeemed through payment in convenient installments. Thus, the value of these institutes lies not in the sphere of capital accumulation (although they accumulated considerable deposits), nor in that of capital creation (although they also issued negotiable bonds which, however, never acquired the importance of those of the Landschaften as most loans were made in cash), nor in that of capital mobilizer (even in this they played an important enough role in their respective area of operation). The greatest value was in the sphere of education: they had shown that mortgage credit at low cost can be made available profitably to small and medium sized farm owners on a sound business basis. At the end of the nineteenth century, it was reported that these banks made loans which fell within the range between 50 and 11,000 mark, the bulk around approximately 3,000 mark (ca. 1,000 thaler).¹⁶⁶

Of the category of joint-stock mortgage banks, only one came into existence during the period of our discussion, the Manorial Private Bank of Pomerania at Stettin (Ritterschaftliche Privat-Bank in Pommern). Originally established on the instigation of Ernst von Bülow-Cummerow, the institute represented the transition from banking institutes catering exclusively to a certain section of the society, here the large landowners of Pomerania, to a commercial type of enterprise catering to all sections of the society.¹⁶⁷

The Pomeranian institute was founded in 1824¹⁶⁸ on behalf of the manorial landowners of which Bülow-Cummerow was the spokesman.¹⁶⁹ It was established as a private credit institute with a number of public privileges such as exemption of the stamp tax and free postal service.¹⁷⁰ The bank was authorized to issue notes for one million thaler which were to be secured three-quarters by Pomeranian mortgage bonds and one-quarter by State Treasury Notes (Staatsschuldscheine) loaned to the institute by the Prussian State Treasury. In order to create a second million thaler of capital, for each of the 250 original shares issued, a further 100 thaler were to be deposited. The 250,000 thaler thus realized were to represent the working capital of the institute upon which dividends were payable. However, none were to be paid until the second million of capital was realized.

Almost from the beginning, the bank ran into difficulties, although the benefits this institute brought to the region could not be denied. The problems centered around two basic facts. Firstly, the shareholders, themselves in great need of capital, were not able to provide the institute with the liquid capital reserve. Secondly, loans were made on a too liberal basis, and as security, promissory notes were accepted. Lastly, the notes the bank put into circulation exceeded in value the restriction as

stipulated by the statute in reference to the ratio of note issuance and reserve fund.¹⁷¹ By 1830, the bank was faltering just short of bankruptcy. The government increased its control over the operation of this institute and reconstituted the bank in 1833 and in 1849 which in effect changed the bank into a commercial institute.¹⁷² Henceforth, it was permitted to accept mortgages only as supporting securities.

One of the central figures in the controversy of the operation of the bank was, as might be expected, Bülow-Cummerow. At the end of 1829, he pointed out to the government that business was solid and accelerating, which indeed it was. Furthermore, he argued that the activities of the bank were of great benefit to the region. The wool market of Stettin would long have been forced to curb its activities because of the lack of circulating specie, paper money, and money substitutes. Then, usury, the curse of the country before 1825, was practically eliminated. Finally, assistance was made to the local benefactors of fire insurance claims and to the Pomeranian Mortgage Credit Association.¹⁷³ On the other hand, he had to admit that the bank had failed to circulate the notes as authorized, but he blamed their unpopularity on the activities of the local office of the State Treasury which accepted these notes as tax payments as decreed,¹⁷⁴ but refused to recirculate these. Furthermore, the officials of the government office were instructed to exchange these forthwith for cash at the bank.¹⁷⁵ Whatever the justification of this procedure, the net effect was a withdrawal of badly needed circulating money with the same results as was experienced in the Prussian Rhineland province.¹⁷⁶

Three months later, on March 20, 1830, the government made public its official answer to Bülow-Cummerow's charges. It stated that, if the government would recirculate the notes of the institute, they would

become officially sanctioned state notes, prohibited by the edict of January 17, 1820.¹⁷⁷ In this connection it is well to remember that the state knew how to circumvent this restriction if it so desired, as we shall see later. In the meantime, Berlin refused to assist the bank because it was believed that accepting the notes as official money substitutes would alienate the very people who needed this sanction. The only alternative to the ailment seemed to have been its reorganization. This, the government proceeded to do for it could hardly ignore the benefits the bank had provided for this region. Furthermore, and perhaps more important as a motive for the state's intervention, was the fear that liquidation could result in a widespread and embarrassing money shortage which would have had disastrous effects on the economy of Pomerania.

Public opinion had already begun to question the institute's activity. Typical was the note which appeared in the leading liberal south German daily, the Augsburger Allgemeine Zeitung. It read in part:

Already as a consequence of the malicious rumors which concern the affairs of the bank of Pomerania, it had to cease payments because of the deluge of notes being presented. Even though the total value of the issued notes of one million [thaler] is secured by fixed capital, they nevertheless lost much of their market appeal because of the widespread belief in the insolvency of the bank.¹⁷⁸

The following year saw the total reorganization of the bank. The cabinet order of January 23, 1833, brought the institute under the jurisdiction of the Ministry of Finance and the Interior,¹⁷⁹ although the state denied responsibility of the bank's operation. One again, the assets of the institute were found to be inadequate to weather the crises of the 1840's. On April 24, 1849, its statute was revised in order to remove any restrictions which might hamper its activities.¹⁸⁰ Among other things, it was henceforth to operate as a commercial enterprise, not to limit its activity to agricultural interests, and to issue notes to the value of one million thaler.

The problem of the degree to which the bank contributed to accumulation, creation, and mobilization of capital remains hypothetical. On the surface, business seemed to have been sound enough (Table 12). Opinions blame the failure of the bank's attempt to develop into a sound credit institute on mismanagement,¹⁸¹ and perhaps there is some truth in this contention. Yet, it is also apparent that the institute was restricted in its proper development because of the state's fear of losing control of finance in the country.¹⁸² The Prussian bureaucracy did not yet understand the relationship between capital and economic need, and would not for some years to come.

TABLE 12

THE BUSINESS OF THE MANORIAL PRIVATE
BANK OF POMERANIA AT STETTIN^a
(in million of thaler)

	Circulation of Notes	Current Account ^b	Deposits on Hand ^c	Lombard Credit Demands ^c	Cash on Hand ^c
1825	0.2	11.1	...	....	...
1833	0.4	32.7	...	...	...
1835	0.5	32.8	1.9	0.7	1.1
1840	0.5	67.4	4.6	1.4	0.5
1845	0.5	51.9	4.0	2.1	0.4
1847	?	59.8	3.9	2.2	0.4
1849	?	36.6	2.6	1.6	0.4
1851	1.0	57.7	3.2	1.8	0.5

^aHübner, II, 19-23; Poschinger, I, 251.

^bTotal for the year.

^cAs of December 31.

Of lesser importance for our purpose are the loans which were made available by the provincial and district administrations. The Meliorationsfonds provided low-cost funds for land improvement such as

drainage, irrigation, and dyke construction projects, and as assistance to various communal and ecclesiastical organizations for their projects. These included also industrial and commercial enterprises. The private investor and the existing investment institutes were not attracted to this type of credit business because of the low rate of interest, limited to four per cent per annum. Most of the time it stood at one-half of one per cent below other types of investment. Furthermore, these loans could not be recalled, and the repayment could be made only in small annual installments.¹⁸³ The Provincial Aid Banks (provinziale Hilfskassen) were also government sponsored and provided funds for community projects. On a limited scale, landowners could obtain credit for the improvement of their farmstead if they could not obtain it in adequate amounts elsewhere. Such farm loans often exceeded the assessed value of the property.¹⁸⁴ The credit thus provided was neither mortgage nor personal but rather a combination of both.

More important for our purpose were the rent-charge banks (Rentenbanken). Like the others, they were Prussian in origin and created and mobilized capital. Their history is tied in with peasant emancipation as they were established to speed up the settlement of the service obligations which were being commuted, and to facilitate the creation of peasant ownership by the establishment of small farming enterprises.¹⁸⁵ As we have seen, the Landschaften, and to some extent the savings banks, provided the potential and established small landowner with credit, but basically, their service to these people remained inadequate. While the non-Prussian states had their district and state mortgage credit banks which served the smaller (peasant) landowner in these parts of the country adequately, Prussia lacked this service.

In particular, the functions of the rent-charge banks were the issuance of bonds to vendors of agricultural property for the conversion into and sale of their estates as small farmsteads, usually between 2½ and 175 acres in size depending on the productivity of the land.¹⁸⁶ The bank thus became responsible for the annuities due in respect of the purchase of these holdings, to grant loans for land settlement by providing the purchase capital, and for the construction of suitable buildings. The bonds issued by the bank ranked as official government securities and were therefore recognized trustee investment; they traded favorably at the Berlin Stock Exchange (Fig. 6). Were the bonds traded below par, the vendor was able to receive additional ones so that he did not sustain a loss. Repayment of the loans by the new owner did not begin until ten years after the date of purchase of land, and then he had the option to make as many as 673 monthly installments.¹⁸⁷

The importance of these institutes was that the state provided the new small farmer with the benefits of its credit while leaving the actual settlement to private enterprise and risk. On the other hand, the vendor of agricultural property received an immediate settlement in state bonds which he could trade at his convenience without ever fearing to sustain a loss. In this way, a considerable amount of money substitutes entered the general system of securities (Table 13).

TABLE 13

BONDS OF THE RENT-CHARGE BANKS^a
(in million of thaler)

	Issued	Repaid	Circulating
October 1, 1865	82.9	8.9	74.0
October 1, 1869	86.2	12.4	73.8

^aMeitzen, III, 122; IV, 274.

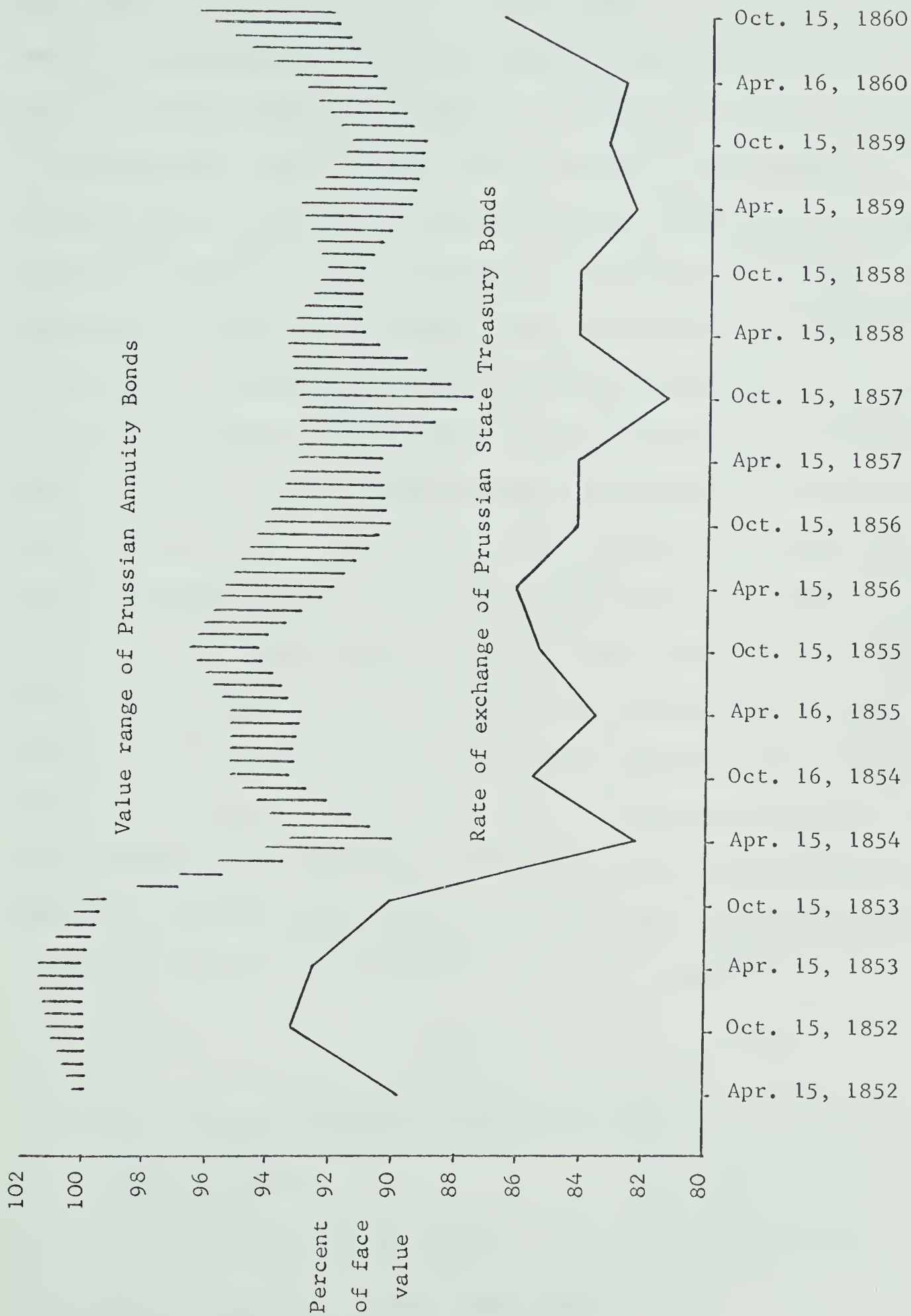


Fig. 6--Trade of Prussian Annuity Bonds and State Treasury Bonds at the Berlin Stock Exchange 1852-1860.
See also Appendix G.

Finally, as a provider of agricultural credit, the savings banks played an important role, although not in Prussia until they had received their legal status in 1838.¹⁸⁸ Their functions as accumulators of capital was already discussed in the first chapter. As we have seen, the earliest types of savings banks were established in conjunction with the reform of the poor laws during the last third of the eighteenth century. Founded under the guarantee of public authority, their deposit business was seen in Prussia as an infringement of the edict of January 17, 1820, as late as 1847 insofar as the state became the debtor to the depositor.¹⁸⁹ Nevertheless, nothing serious came of these considerations. The promotion of the establishment of these institutes continued to be encouraged in order to further the thrift and welfare of the people.¹⁹⁰ Generally, they were not to seek profits, and their surpluses were to cover the operating expenses only. If there was anything left over after the necessary deductions, it was turned over to the local poor treasury. Therefore, the banks were in a good position to offer premiums on new deposits.¹⁹¹ On the other hand, they were quite remarkably able to weather the economic crises of 1840's (Table 14). Withdrawals of deposits, now almost as high as the deposits at the Royal Bank at Berlin (Table 6 and Appendix C), compared favorably with those of other institutes, keeping in mind who the depositors actually were in this case.¹⁹²

TABLE 14

WITHDRAWAL OF DEPOSITS IN 1848^a

Savings Banks	13%	of deposits
Bank of Prussia	19.7%	of deposits
Seehandlung	20%	of deposits
Manorial Private Bank, Stettin	27%	of deposits

^aJAS, II, p. 56; Niebuhr, GeschKglBank., pp. 97, 228; Poschinger, II, 278.

It was estimated that at the turn of the century, up to three-quarters of the total deposits of the savings banks were invested as agricultural credit,¹⁹³ although in 1856, of the 13.2 million thaler invested in mortgages by these banks, over 50 per cent (7 million thaler) were placed as urban mortgages.¹⁹⁴ During the following four years, the total mortgage investment was doubled, yet at least in Prussia, this continued to be divided almost equally between rural and urban properties.¹⁹⁵ Exact statistics concerning the investment preferences of savings banks prior to 1856 are not available. However, the granting of loans on personal security always had been negligible, although investment in bonds with or without sureties seemed to have been common, of which a considerable portion (reported up to one-third) were agricultural bonds.¹⁹⁶ The various German governments strongly urged the savings banks to favor agriculture in their investment preference.¹⁹⁷ To this end, many were established throughout the rural areas of the country where they figured prominently both in the accumulation of capital and as agricultural credit granting institutes.

Mortgage loans made by the savings banks for agricultural purposes had certain disadvantages because loans were subject to recall at three or six months' notices in compliance with the agreements between the bank and the depositors. Furthermore, these loans could not be repaid in installments for much the same reason. Then, the rate of interest charged by savings banks tended to be slightly higher than those of loans obtained through other sources. Generally, however, the only real disadvantage was the right these institutes reserved to themselves to change the rate of interest because the market competition might have made such a step necessary. A higher interest premium on deposits

during periods of capital scarcity automatically raised the rate of interest on all outstanding loans. In contrast, the opposite became also true at times as the trend reversed itself.

The small and medium sized landowners were apparently excellently served by these credit institutes. After 1850, the rural network of banks expanded rapidly in response to the various governmental decrees to this effect.¹⁹⁸ Considering that during the second half of the nineteenth century, the number of loans made to the agricultural section of the economy as well as their individual size increased rapidly, so that some people became alarmed by the expanding agricultural indebtedness, they nevertheless remained moderate. It was reported for the Mark Brandenburg in 1897 that 36.7 per cent of all agricultural loans averaged 322 thaler, 26.7 per cent 826 thaler, 35.6 per cent 1,789 thaler, and that only 2 per cent averaged 24,773 thaler. The average of the whole was apparently 1,897 thaler.¹⁹⁹ In other words, 63.4 per cent of all agricultural loans at the end of the century did not exceed the moderate sum of 1,050 thaler, although by that time, prices and consequently credit needs were much greater than for the period under discussion.

Fifteen per cent of the total credit business of the savings banks was made on bills of exchange, scrip, and bonds, with or without sureties. These were usually loans of small amounts and designed to help the small businessman or manufacturer over temporary payment embarrassments.²⁰⁰ Generally, these loans ranged from 1,050 thaler on personal bonds without surety to approximately 2,100 thaler with sureties.²⁰¹

From the beginning, German savings banks enjoyed relative freedom of action. They were not obliged to deposit their funds with the state

treasury, nor were they restricted in their types of investment preferences other than to safeguard to the utmost the security of their funds entrusted to them. Since investment in industrial enterprises constituted a grave risk during our period which these institutes were not willing to take, the field of industrial financing was left to the private banking institutes.²⁰²

CHAPTER V

THE PRIVATE BANKING INSTITUTION

Beginning with the Railway Age in Germany, considered by many as the decisive turning point in German economic development,²⁰³ the private banker assumed the role of leading capital mobilizer.²⁰⁴ Part of this success can be traced back to his activities in commercial transactions. Being located predominantly in trade centers,²⁰⁵ the banks evolved from an enterprise specializing in the facilitation of payments between merchants to one in providing credit, eventually to become the principle link between the saver and investment opportunities. In this role, he needed to be keenly responsive to fluctuations of the capital and trade market. Finally, the circulation of the banks' current liabilities which assumed the character of money substitutes, and the recognition that public deposits enhanced the lending power of the institute both made the private banker the foremost creator of new means of payment and credit during the crucial years of German industrialization. To this end, the private banking institution assumed the function of a bank of issue, effectively opposing the governments' restrictions on the supply of money.

The German private banking houses began as merchant enterprises and were, at least until the middle of the century, largely located in the traditional centers of commerce and political life, in Berlin, Frankfurt-am-Main, Hamburg, and Leipzig. They could trace their first

banking activity to the financial needs of the various German governments. It was in the function of court banker that they developed those techniques which were to become so important in financing industrial operations.²⁰⁶ Being able to convert short-term loans into long-term securities, and then to place these at a profit, they successfully combined money and stock market operations. This was to become a distinguishing feature of German banking activities in future years. Incidentally, it was later to play an important role in the merging of banking interests and industry in the cartelization movement of German industry.²⁰⁷ However, at least until the 1840's, private bank credit to industry was largely confined to local needs and was of limited size. The banks lacked the organization and the financial capacity to go beyond this.²⁰⁸ Furthermore, the financiers of Berlin and Frankfurt-am-Main consistently rejected any heavy involvement in financing industrial enterprises.²⁰⁹ Their great activity in commerce is testified by the fact that of the 1,829 commercial firms operating in Frankfurt-am-Main in 1855, 190 registered as private banks.²¹⁰

Prussia could boast of 642 private banks and bank-like institutes in 1861 (Table 15). The number actually employed in the banking business in this state testifies to the moderate size of each house. For example, the employment figure suggests that each institute, besides the principal, only employed one assistant. By mid-century Berlin with its half million inhabitants and 712 large commercial corporations, employed only 384 bank principals and clerks.²¹¹ This situation, it seems, was rather typical of Germany in general.²¹² Of course, much of the private banker's activity was exchanging specie. Transactions were slow, as may be expected a critical factor in the capital crises of mid-century. Cashless (giro)

transfers were far from being fully developed. Even transactions between banks were conducted by actually transporting the cash in carts, as one could witness every morning in the streets of Frankfurt-am-Main²¹³ or occasionally in the streets of Cologne after the famed "Rothschild shipments" had arrived from up-river.²¹⁴

TABLE 15

PRIVATE BANKS AND BANK-LIKE INSTITUTES IN PRUSSIA 1800-1861^a

	1820/21	1843	1846	1849	1852	1855	1861
Rhineland	50	93	98	102	110	102	141
Berlin	60	80	?	107	132	?	165
Prussia	330	424	442	439	440	513	642
No. employed	?	?	658	864	940	994	1,219

^aJAS, I, 464; Tilly, Financial Institutions, p. 47; Tilly, "Germany, 1815-1870," p. 161. These figures include bankers, money changers, and bill dealers.

While private banking was still a part-time activity for most houses at least until the 1840's, the accumulation was primarily a matter of retained profits, for the institutes had little more than their own capital to work with. However, the picture began to change rapidly during the late 1830's when the financial institutes of private ownership started to compete with the savings banks in attempting to attract deposits from the general public. In contrast to these, the private banker could offer a higher return to the depositor, not to speak of the disregard of any philanthropical motives in reference to the poorer section of the population; anybody could avail himself of the services offered by this institution. It was understood from the beginning that the money entrusted to the private bank would be invested in commercial

and industrial enterprises. Therefore we are not concerned with deposits of current accounts, although the term "bankmässige Depositen" usually included both, deposits of current accounts and what might be broadly termed "savings deposits." The deposits we are concerned with here were placed with the private banks for purposes of investment only, much the same as was the case with the savings banks. Deposit receipt books (Depositenquittungsbücher) were issued in most cases, or otherwise the amounts thus deposited were kept as separate entries in the banks' ledgers. In the light of the considerations advanced in chapter I it is not really surprising to discover that the bulk of these investment resources came from the small saver, the pensioner, laborer, artisan, the domestics and the civil servant.²¹⁵

The Rhineland banker was the most active in marshalling these resources and investing them profitably (Table 16). He had developed his business in response to Prussian monetary and banking policies after 1815.²¹⁶ His most rapid expansion had taken place during the 1830's and the 1850's (Table 15), coinciding with the increased need of the expanding commercial and industrial enterprises throughout Rhineland Germany. However, one should not discount the activities of private bankers in other parts of Germany. Elsewhere, they also performed an important role in the development of industrial growth. As the various sectors of industry and commerce developed, private bankers assumed an increasingly greater part in the creation and mobilization of capital. By mid-century, private bankers were quite adept at circulating their current liabilities among the public. Through the combination of voluntary savings and the creation of credit, especially the creation of current ("quick") liabilities which circulated as money substitutes, the

private banking institution promoted entrepreneurial activities while at the same time through its funding activity prepared itself for the subsequent success of the German mixed banking practices. The intricate relationship between the economic dynamism which became apparent in the industrial regions of Germany after the 1830's and state interests in economic matters illuminates this development.

TABLE 16

ESTIMATED CAPITALIZATION AND DEPOSIT INVESTMENT BY THE
RHENISH PRIVATE BANKS 1835-1865^a
(in million of thaler)

	1835	1845	1847	1848	1850	1855	1865
Bank capital	5.5	20.0	..	..	..	37.0	83.0
Deposits	2.0	7.0	..	..	10.0	13.0	28.0
Investment	..	..	9.5	4.5	6.7	..	..

^aAnnual Report of the Cologne Chamber of Commerce, 1850; Tilly, Financial Institutions, pp. 61, 77.

PART III

ECONOMIC GROWTH AND THE POLITICS OF MONEY

CHAPTER VI

CHRISTIAN VON ROTHER AND FISCAL MANAGEMENT

For reasons already mentioned, the economic history of post-Napoleonic Germany was to the greatest extent determined by Prussian economic policies. Thus, the Prussian bureaucrat who either devised or carried out policies exerted his influence on economic development throughout Germany.

The rate of economic growth was related to the socio-political tensions that existed among the bureaucracy and the commercial, financial, and industrial entrepreneurs, at least until mid-century. The revolution of 1848 was also to leave its imprint on this relationship. Any analysis of financial politics and the economic growth of this era is necessarily a study of the interaction of complex historical forces. The development of banking activities, for example, must be seen as a segment of the overall economic and social development. The state consistently failed to recognize the value of banks of issue and their capacity to engage in economic opportunism which could have been exploited for the benefit of the state. This testified to an inability to cope with the economic problems of the time as well as to an unwillingness to distinguish between supply and demand of capital.

Before we can examine the effect of industrial investment and speculation on the controversy over reform and stability which leads us to the capital crisis of the 1840's, we must first analyze the reorgani-

zation of the post-Napoleonic finances and the activities of the officials who controlled the liquidation of the Prussian state debt, the state budget, and the activities of the various financial crown institutes.

The Prussian government verged on bankruptcy when Wilhelm Anton von Klewiz became Minister of Finance in the autumn of 1817.²¹⁷ A surprising debt of twenty million thaler needed to be dealt with at once and money to be found for defense and post-war reconstruction.²¹⁸ Obviously, the handling of the government's financial affairs under the preceeding Minister of Finance, Ludwig Victor von Bülow,²¹⁹ the nephew of Chancellor von Hardenberg, left much to be desired. There was no long-range planning in the ministry as decisions were made on a day-to-day basis, a practice Bülow was forced to follow when he managed the finances first of Westphalia and then of Prussia during the war years. He continued the practice of securing additional loans to cover debts, usually at interest rates which ranged between 10 and 20 per cent.²²⁰ However, in spite of this gross management of the state's finances, Prussia had apparently never been delinquent in her obligations.²²¹

A loan, secured shortly before Klewiz took over the ministry, alleviated the immediate pressure, but it was by no means sufficient to put the financial affairs on a sounder footing. If Prussia was to reestablish her international credit rating, drastic measures were called for. Hence, the securing of another and considerably larger loan with a long-term repayment period became urgent business. Attempts to contract the necessary funds from the Berlin banking houses ended in failure. By the end of March 1818, the need became so urgent that it was feared the government could not meet its payroll obligations. An attempt to contract a loan of ten million thaler on the international money market also failed. The ceiling of five per cent interest the Prussians were prepared

to pay did not provide enough incentive to attract international speculators. French securities, for example, promised a higher return. On the other hand, the Austrian, Dutch, Neapolitan, Russian, and Spanish governments forbade their respective banks to make loans to foreign countries because of their own pressing needs.²²² The only financier who was interested, although he had never made an international loan of any size, was Nathan Rothschild of the London house. After having been approached by the London banker Baradon who also acted as the British agent of the Seehandlung, Rothschild agreed to negotiate for a transaction of twenty million thaler.

Before the negotiations got under way, the international money market worsened. The years 1817/18 were noted for crop failures, high prices, and economic crisis. At London, the conferences had bogged down when Wilhelm von Humboldt, Prussia's emissary at London, intervened. In a letter to Hardenberg, he reported that Baradon had not been a good choice as negotiator and urged that a more competent person be sent to the British capital.²²³

Christian von Rother,²²⁴ the man who emerged as the new negotiator, had just taken over the directorship of the Office of the State Treasury, a department which also handled the administration of the state debt, previously a section of the finance ministry. As the director of the new state office he was responsible to the chancellor. Rother, perhaps more than anybody else in the Prussian government, believed that it was the state's responsibility not only to direct the country's economy by regulating all commercial and industrial activities, but also to instigate such innovations which were to advance the technical aspects of an economic development.²²⁵ Unlike his English counterparts, the Prussian bureau-

crat liked to believe that the majority of manufacturers and merchants were unable to practice true economic liberalism (after all, was not the civil servant better educated?), and that for this reason any lessening of state involvement would spell economic disaster. But as we shall see, and Rother was no exception to this human weakness, the Prussian bureaucracy feared that its privileged position was being challenged by the industrialists and merchants and actually opposed any cooperation between private enterprise and state economic planning.²²⁶ To Rother, the state was omniscient as much as its ruler was omnipotent.²²⁷ There is no doubt that his basic economic doctrines and his behavior as an influential civil servant was influenced by mercantilistic economic concepts and conservative "restoration politics."²²⁸

Rother, "one of the most interesting men of the Prussian bureaucracy,"²²⁹ began his career as an obscure regimental clerk and was catapulted into prominence by the Prussian chancellor Hardenberg and the British hero of Waterloo, Duke of Wellington, who recognized in him his exceptional gifts. He was instrumental in establishing a formula of French reparation obligations to the victorious allies and was praised by both parties for his efforts. From then on, Rother's career was meteoric, even by today's standards. He was the obvious choice to handle the negotiations with Rothschild, "to save the state from disaster," but was reminded by Hardenberg to negotiate "honorably and resolutely like a gentleman."²³⁰

The deliberations were tedious and required a great deal of tact, diplomacy, and mental agility. The constantly changing international money market and the insistent pressure from Berlin, either from those who wanted to hasten the proceedings or from opponents to any attempts

of securing a loan at London did not facilitate matters. However, the opposition from home had a beneficial effect. The Berlin bankers suddenly offered the Prussian state a loan of fifteen million thaler, reducing their original stringent demands²³¹ and now competing favorably with the offers of Rothschild, so much so that Rother at one point was undecided how to proceed further. Rothschild answered thereupon with a counter-offer of thirty million thaler at a rate of issue of 75 per cent, prompting a response of the Berlin bankers in the form of a twenty million thaler offer.²³² Rother decided in favor of the Rothschild offer.

Another consideration came into play. Rother and a number of colleagues believed that a state debts contracted domestically would limit the amount of capital available for domestic credit purposes or, at least, make capital for credit purposes more expensive,²³³ thus restricting the recuperating and developing economy while at the same time benefitting speculators, the unscrupulous or otherwise. Since, however, the state needed money to meet its obligations, it had no choice than to secure a loan outside of the country.

Opposition to Rother's activity was great. Graf von Bülow, the former Minister of Finance who continued to exert a decisive influence on fiscal management as president of the financial section of the State Council (Staatsrat), agitated against Rother's plans to secure a large loan as he saw in it a critique of his financial management. The president of the Royal Bank, Karl Ferdinand von Friesen, preferred that the loan be contracted with the Berlin bankers for reasons of public opinion.²³⁴ This opposition forced Rother to propose to Hardenberg the devious scheme of continuing the negotiations with the Berlin bankers while he

conferred with Rothschild in London. However, with him he took the authority of concluding the negotiations and to commit the state to a debt obligation as soon as he was able to secure a loan of thirty million thaler at a rate of issue of 70 per cent (approximately 5 per cent interest), a condition it was believed he would not be able to obtain.

The negotiations lasted for one week, from March 24 to March 31, and most of the time began at ten in the morning, to end at two the next. It is recorded that Rother frequently remained out of bed in order to deal with the necessary correspondence or calculations and with correcting the various clauses of the proposed loan agreement. He signed the contract obtaining the loan at three different rates of issue, namely half of the amount at 70 per cent, the remainder at $72\frac{1}{2}$ and 75 per cent in equal portions. This amounted to an average rate of issue of less than 72 per cent or to just over 5 per cent interest.²³⁵ The loan was secured by mortgage bonds of the royal domains (Domänenpfandbriefe) and "a bond of the King's,"²³⁶ indicating that the loan was not so much advanced to the state but rather to the sovereign personally. The liquidation was to take place over a period of twenty-eight years through equal annual re-purchases of the collateral, the payments to be deposited at the Bank of England.²³⁷

This constituted the first international loan by the Rothschilds and the first "to do homage to the pound sterling," as one writer was quoted to have said.²³⁸ The stock was offered during the first week of April of the same year at 75 per cent rate of issue at the London Exchange and reached par in 1824.²³⁹ Already on May 7, the stock traded at 10 per cent above issue at the Berlin Stock Exchange.²⁴⁰ Much of the popularity of the stock was due to the guaranteed annual dividend payment of 5 per

cent, payable at London by the Prussian government, a novelty that not only fixed the rate of the pound sterling but also made foreign loans popular at the London market.²⁴¹

While this was not the last loan which Rother negotiated at the international money market on behalf of the state, his handling of the whole affair was to enhance his position and prestige within Prussian officialdom, enabling him to play henceforth the most prominent part in the reorganization of the state's finances.

Almost two years later, on January 17, 1820, the Prussian government published an account of the state's financial affairs (Table 17), "in the hope of strengthening by it [the publication] the public's trust toward the state and its administration."²⁴² The State Debt Edict, as this piece of legislation became known, stipulated future rights as to who could contract state debts. This proved unfortunate in its effect as it made the state's financial affairs part of the constitutional issue. The edict also separated the administration of the National Debt Office (Hauptverwaltung der Staatsschulden) and that of the Seehandlung; the latter became an independent state financial institution under the cabinet order of the same date.²⁴³ This cabinet order placed the trading corporation in a position to circumvent the restriction of the State Debt Edict that in the future loans can only be contracted on behalf of the state if approved by the assembly of the provincial estates. It gave the institute the authority to act as the sole agent for all the state's foreign transactions. In addition, it was to handle some undefined domestic affairs on behalf of the state which required the firm's facilities and experiences.²⁴⁴ Since the corporation's assets constituted excellent securities, loans could be procured quite readily and, if the need arose, could make these available to the state for various productive

purposes such as road-building and founding of industrial enterprises. Thus, the corporation assumed the role of state financier, and in time achieved the reputation of a charitable organization working for the benefit of the state. Upon closer examination, we detect Rother's hand in this development.²⁴⁵

TABLE 17

THE STATE DEBTS OF JANUARY 17, 1820^a
(in million of thaler)

Interest-bearing state obligations	180.1 ^b
Provincial state debts	25.9
Interest-free state obligations	11.2
<hr/>	
TOTAL	217.2
<hr/>	
<u>Not included were:</u>	
Deficit of the Royal Bank	7.2 ^c
Obligations in connection with agrarian reforms and the <u>Meliorationsfonds</u>	25.2 ^d

^aGS 1820, p. 17.

^bOf this, 119.5 million thaler were State Treasury Bonds of which at that time, only 56.6 million thaler were in circulation.

^cSupra, p. 37.

^dSupra, pp. 61-62. Included in this figure are the 1.6 million thaler of unpaid melioration obligations as shown supra, n. 88.

By 1825, the Prussian finances had improved. When Friedrich von Motz²⁴⁶ took over Klewiz' ministry in this year, he was still faced with a deficit of seven million thaler, yet the annual budget amounted to fifty million thaler of which nearly one-fifth was required to meet debt redemption obligations and the annual dividend payments.²⁴⁷ Since an increase of revenues was desirable, although not nearly as urgent as in 1817, Motz first intended to reorganize the various financial departments of the

state, a task for which he was well qualified after many successful years as president of the district of Erfurt.²⁴⁸ On taking office, he demanded complete control of Prussia's finances. Although he was able to gain some concessions, Rother did not give up the control of the affairs of the Seehandlung and the National Debt Redemption Office. The Royal Bank remained outside of the influence of the state administration. Luckily for the government, Motz and Rother worked well together, and under their combined leadership Prussian financial affairs continued to improve while concomitantly, the finance ministry underwent extensive reorganization.²⁴⁹

On May 30, 1828, three years after taking office, Motz was able to report to the King that a surplus of 9,650,000 thaler had accumulated. Here was visible proof of the success of his tax reforms, of the more efficient collection system, and of the improved administration of the royal domains and forests. The revenues had, without actually raising taxes, increased appreciatively.²⁵⁰ Prussia's credit had improved enough to have enabled Motz and Rother to successfully conclude a conversion scheme that reduced the interests of the state bonds from five to four per cent.²⁵¹ In the years that followed, Rother was able to instigate another conversion (in 1842), and the interest of the Prussian Treasury Bonds declined from 4 to 3½ per cent per annum. Between 1820 and 1843, he was able to reduce the state debt by sixty-eight million thaler, and as we have seen, after 1828 the state operated on a surplus budget.

Rother was convinced that budget deficits and state debts would lead to inflation. Since deficits needed to be secured somehow, perhaps the most important consideration in public finance, three alternatives were available. The first was the use of a bank of issue; yet the edict

which reorganized the affairs of the Royal Bank made this impossible,²⁵² and to found another bank specifically for this purpose was contrary to contemporary opinion. A second possibility was liquidation of the state's assets by selling its properties. Motz made some use of this when he reorganized the administration of the royal domains and forests. A third possibility was to increase the state debt.

While the last solution was not a particularly good one, it nevertheless offered the least danger to the stability of the country's currency, providing the state debt remained within certain limits. At the time under consideration, signs indicated that Prussia was far from reaching this limit, for the total operating budget and the national income constituted ample security in covering additional state obligations. Furthermore, it should be pointed out that Prussian papers of value enjoyed, especially after 1846, increased popularity. Hence, foreign owners of state papers had no intention to become a burden upon the Prussian balance of foreign exchange by dumping their securities.²⁵³ What Rother misunderstood was the criticism of the deflationary policies by bankers and industrialists. He viewed these as personal attacks²⁵⁴ and ignored the developing capital shortage and the effect of his attempts to reduce the state debt by redemption of the foreign loans.

Finally, in 1843, Rother began to realize that his original plan to have redeemed all state debts was perhaps not a sound one after all. Indeed, Prussia's per capita indebtedness was already the lowest in Europe (Table 18). He advised Frederic William IV that the national debt redemption below 100 million thaler (it was estimated that this level would be reached by 1852) was not a sound policy since it would deprive the investing public of sound domestic investment opportunities.²⁵⁵

Unfortunately, as we shall see, this change of policy came too late to stop a worsening of economic conditions in Prussia.

TABLE 18

PER CAPITA STATE DEBTS IN EUROPE 1843^a

Country	Per Capita ^b Debt	Absolute Debt ^c
Holland ^d	409.5	1,290
Great Britain	205.4	5,578
Belgium	48.4	208
France	41.5	1,410
Austria	16.6	579
Prussia	9.8	140

^aAHGS, p. 578.

^bIn thaler.

^cin million of thaler.

^dExcl. colonial debt.

One must now query the extent to which Rother's administration of the state debts influenced the availability of capital in the country. His first concern was the reduction of debts. One should imagine that his anxious attempts in this direction would be confined to obligations arising from Prussia's involvement in the Napoleonic Wars. However, he even considered loans contracted for the express purpose of public benefit such as the subscription of bonds instigated by the Seehandlung in 1832²⁵⁶ as unnatural burdens to be removed as soon as conditions warranted.

Rother preferred to obtain capital from foreign sources in order not to deprive domestic trade and industry of working funds. He was not reacting to the complaints of a lack of available domestic money which developed after the time of heavy foreign borrowing. Rother was guided by old mercantilistic ideas that specie had to be drawn into the country

(by foreign borrowing) and freely circulated for the benefit of the people. Any export of money was to be prevented by whatever means possible.²⁵⁷ His management of the state debts was governed primarily by these fiscal considerations, and only secondarily by the actual need of the country for capital. Twice he deprived the market of capital, in 1820 and again in 1832. Three times he imported money, in 1818, 1822, and in 1827, in each case increasing the supply of money without considering the need for it, so that the Royal Bank had increasingly more difficulty in placing its deposits as investments.²⁵⁸ If the "nominal amount of money is determined primarily by conditions of supply," i.e., government supply of it, while "the real money is determined primarily by conditions of demand," as Milton Friedman put it,²⁵⁹ we find little understanding in Rother's planning of such a process. However, he was able to control the nominal circulation of money (supply) in a limited way. He channelled monies as available capital into industrial enterprises, and these were primarily those founded by the Seehandlung under the motive to provide employment in areas of economic disparity.²⁶⁰ Or, whenever a large foreign loan was contracted and specie was minted as a result of it, portions of this were shipped to the various banking houses throughout the country with precise instructions as to disbursement. In connection with the Rothschild loan of 1818, Rother informed the Breslau banking house of Eichborn & Co. that it will receive a number of weekly shipments of newly minted 100,000 thaler each, and to see to it that the money remains circulating within the province.²⁶¹

The state debt redemption proceeded at an accelerated rate to the 1830's. Between 1820 and 1840, a total of 62.7 million thaler were repaid,²⁶² of which 20 million were discharged between 1834 and 1839, or

in 1840.²⁶³ This was offset by the Seehandlung's subscription of 12.6 million thaler in 1832.

Exact figures as to total debt repayment are not available, especially since Rother thought it politically wise to keep both an official budget and also a secret one.²⁶⁴ But on the whole one can surmise that the discharge of state obligations, at least until the 1830's, did not replenish the net capital appreciatively. The earliest redemptions, that is those prior to 1820, involved pension and wage obligations, promissory notes, past-due interest obligations, some bonds, and a series of smaller foreign loans.²⁶⁵ As these papers circulated as money substitutes, their repurchase had no effect of the capital market of the country. The total amount involved was approximately 30 million thaler.

Between 1820 and 1933, about 39.2 million thaler were redeemed, of which 11 million were paid to foreign, and 28 million thaler to domestic creditors at about 2 million thaler annually.²⁶⁶ The latter, moreover, was to a large extent once again simply an exchange of one security into another.

As the years progressed, the amount of domestic capital exported as investment in foreign stock gained alarming proportions.²⁶⁷ However, how precarious the whole financial situation really was, especially since there did not seem to have existed a healthy balance of capital and production, is shown by the events of 1830. Already in May of that year, a lack of capital began to have a depressing effect on the trade at the various stock exchanges, so much so that the newly issued agricultural mortgage bonds of the Posen Mortgage Credit Association could only trade at 72 per cent of par at the Breslau Stock Exchange.²⁶⁸ But losses were largely confined to foreign papers which, because of the heavy in-

vestment in these by large sections of the population and commercial houses, brought some serious consequences to the Prussian money market.

After some initial attempts to alleviate the pressing need of capital,²⁶⁹ the Royal Bank reacted by instigating stringent restrictive measures in fear that the 24 million thaler of short term deposits (eight days recall) which were invested, and its 6 million thaler deficit could seriously retard the activity of the institute. In order to avoid any possible harm, Friese ordered an immediate reduction of all bills of exchange and lombard business. The former dropped from 5.3 million thaler of June to 2 million thaler in December, and the latter from 5.1 million of June to 3 million thaler in December of the same year.²⁷⁰ Once again, the bank found itself incapable of coming to the aid of commerce and industry.²⁷¹ Many enterprises had to terminate their activities as a result of the capital crisis.

The year after the economic crisis of 1830, Germany was subjected to a major cholera epidemic which caused much anxiety within government circles about the general lack of hygienic controls and installations. One of the more celebrated persons who became the victim of this epidemic was the philosopher Hegel. The epidemic was followed by a wave of speculation which seems to have swept all of Europe. Rother issued a domestic subscription loan of twelve million thaler. The emission of these bonds was carefully planned to take advantage of the German gambling desire for the benefit of the state.²⁷² However, in spite of the added domestic investment opportunity, large amounts of capital continued to find their way into foreign stock. The government of course attempted to curb this tendency by issuing its cabinet order of March 31, 1832, forbidding the publication of trade values of foreign

shares.²⁷³ As there was a general censorship resulting from the fears of the Reform Act crisis in England and the revolution of 1830 in France, the general political uncertainty doubtless played a role here. The ultra conservative Rother even suggested that all foreign stock be banned from the Prussian stock exchanges.²⁷⁴ Against this background, the bonds of the Seehandlung were placed on the market with little effect as to any change in the supply of capital.²⁷⁵

CHAPTER VII

INDUSTRIAL INVESTMENT AND THE CONTROVERSY OVER REFORM AND STABILITY

If one were to take seriously Schmoller's words that the widespread mania for fortune hunting at the turn of the century had permanently scarred the moral fiber of German society,²⁷⁶ then the effects of the speculative fever of the 1830's and early 1840's must have been highly destructive. While investment in foreign state papers, especially in the disastrous Spanish State Treasury Bonds, dominated the years immediately following the economic crisis of 1830, investment in commercial papers seemed to have been more or less dormant. Lombard credit could at best command four per cent interest. In desperation, the Royal Bank in 1834 purchased one million thaler of Prussian municipal and state bonds with the result of causing a slight increase in their trading value while at the same time freeing enough capital for a stimulated trade in foreign stock.²⁷⁷ Part of the same scheme was the bank's vigorous discouragement of deposit activity for fear of having to commit these moneys to long term investment objects while they had to be kept liquid. As a matter of fact, part of the increased volume of business transactions of the bank at this time was caused by the turn-over of capital through very short term investment demands, usually not much longer than only for a few days (Appendix C). They involved speculation in commercial cash obligations such as bills of exchange and the equivalent state obligations much like assignats, the cash notes (Kassenanweisungen). A cabinet order of

August 1835,²⁷⁸ perhaps on the insistence of Rother, forbade trading of the latter, and indeed, the bank's annual volume of transactions dropped by almost 100 million thaler (Appendix C). After 1837, the capital market seemed to have settled down, partly in response to the above quoted order, partly because of fear of another disaster in foreign papers as just experienced with the Spanish bonds.²⁷⁹ Furthermore, an air of exhaustion seemed to have settled over the speculating public. By 1837, money had become more expensive, yet trade in Prussian mortgage, municipal and state bonds picked up after Rother had assumed the presidency of the Royal Bank in 1836. His aversion of trade in foreign shares had its affect on the bank's investment policies. This is also the time the various Prussian bonds were being converted.²⁸⁰

Conversion of such magnitude usually carried with them a renewed activity in the capital market. This was apparently the case as the trade in foreign papers of value, at least at the Berlin and Breslau stock exchanges, began to pick up,²⁸¹ for these promised a higher return of invested capital, giving rise to those charges that the conversion scheme "neglected the interests and the need of the country."²⁸² However, the shortage of money eased.

Beginning in 1838, a serious capital surplus developed. Foreign investment houses began to dump large amounts of issue onto the Berlin capital market. However, even after some disquieting initial flurries, the capital market seemed to have absorbed these without much difficulty. The surplus continued to exist as capital could not find its way into more productive channels. Rother, as president of the Royal Bank, complained bitterly of not being able to invest the bank's deposits at a profit. To make matters worse, the trade in foreign papers was drastically curbed

by the decree of May 13, 1840, which forbade installment payments of obligations incurred in the purchase of this stock.²⁸³

The public found itself with a lack of investment opportunities. As the conversion scheme of Prussian bonds continued, their popularity as objects of investment declined (Appendix E, and Fig. 4). The conditions were ripe for a total redirection of the German investment habit, from speculation in governmental bonds toward industrial stock. We enter the era of railroad construction and the public's willingness to participate in this (Figs. 7 and 8).

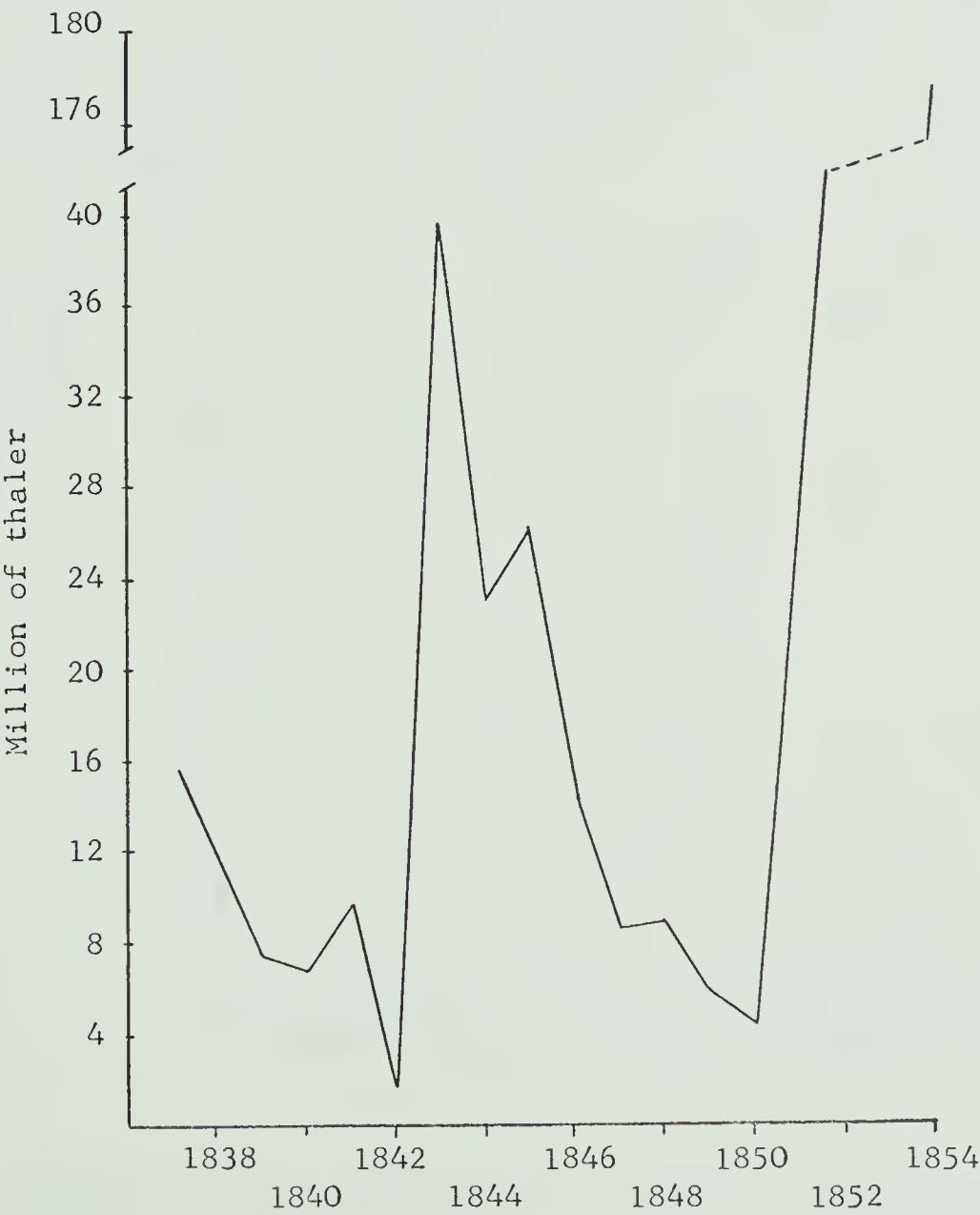


Fig. 7.--Annual investment in railroad stock. See also Appendix H.

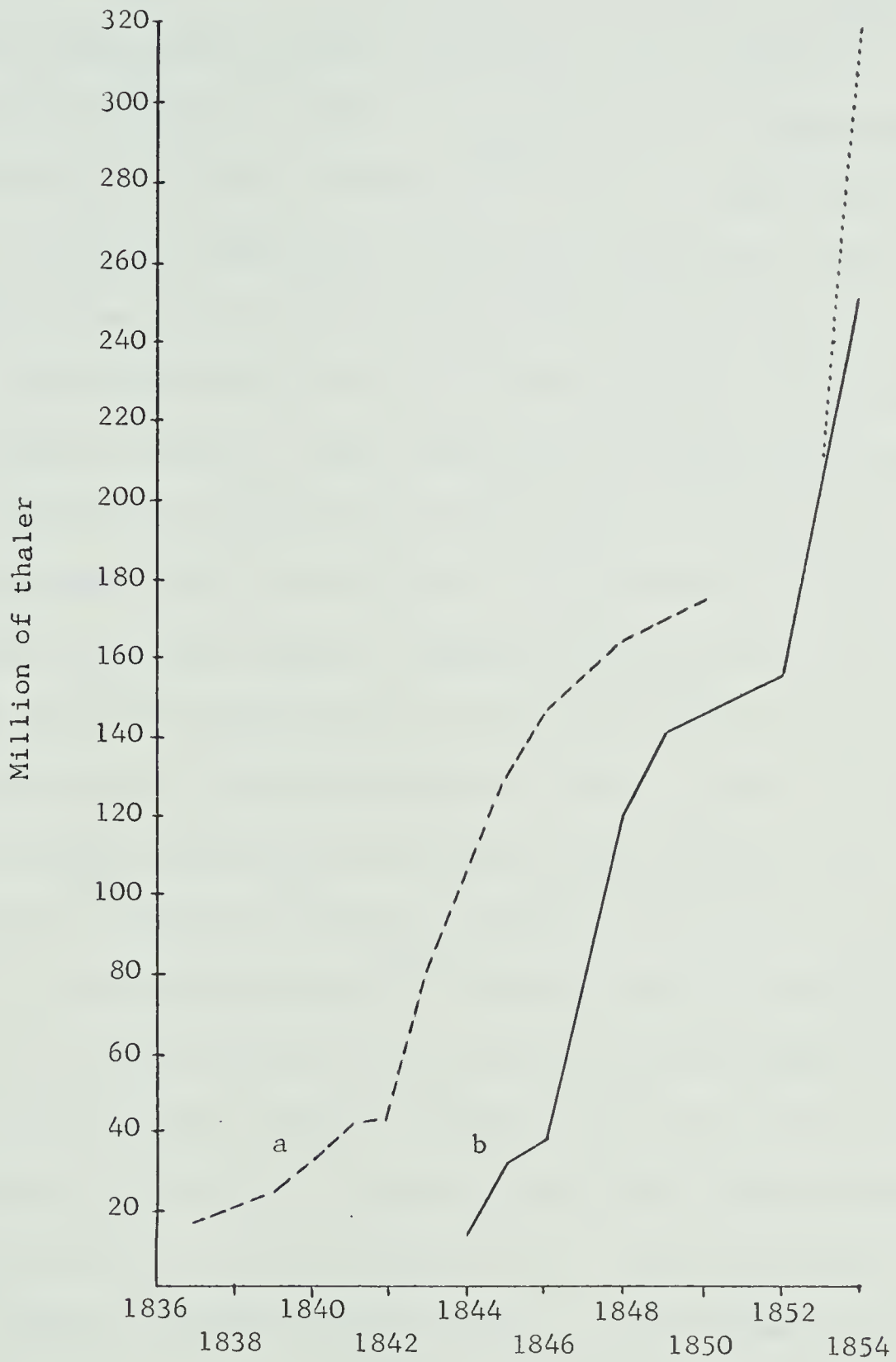


Fig. 8.--Total capitalization of Prussian railroads.

(a) Total railroad investment (accumulated). (b) Total used-up construction capital (accumulated, plus capital pledged for new lines).

See also Appendix H.

The foregoing seems to suggest that there could have been little difficulties in finding the capital needed for railroad construction. Indeed, Sombart believed that railways built themselves by creating their own capital through the resulting stimulation of the economy.²⁸⁴ There was nothing particularly new about this argument, for contemporary literature was full of such conclusions,²⁸⁵ and to a degree they were correct if one did not forget that returns were measured in years, even decades rather than days or weeks as the investing public seemed to have preferred. Many corporations for this reason practiced overpayment of annual dividends in order to remain competitive in attracting investment capital, a point to be considered more fully below. Nevertheless, by 1851, approximately 149.9 million thaler were invested in Prussia alone (Appendix H), and evidence seems to suggest that the total invested in Germany was around 800 million thaler at this time.²⁸⁶ But somehow, the new industry could not immediately ease the capital surplus. During these years Germany experienced a sufficient high increase in the rate of productivity²⁸⁷ (Fig. 2) so that the capital for railroad construction could easily be found domestically.²⁸⁸ However, Rother repeatedly stated that the capital market could not meet an annual demand of more than twelve million thaler without seriously harming the other branches of the economy, especially as a large portion of this money was being used for the purchase of steel tracks and other industrial products from abroad.²⁸⁹ While he deplored capital export, he also became a vehement opponent of any railroad venture.²⁹⁰ He was of the opinion that roads served well enough the domestic trade demands. Nevertheless, this new form of investment, giving the investor the opportunity to gain considerable profit without having to become active himself or to enter a great

risk, became so popular that considerable sums were simultaneously invested in foreign railway shares.²⁹¹

The first years of railroad speculation brought with them a great deal of confusion. The trading activity, especially at the Berlin Stock Exchange, took on alarming proportions to the point that the streets outside were often blocked by crowds of people. The cautious businessman, the banker and the civil servant had until this point only invested in small-risk shares. So did the tradition-bound Prussian nobility which had always preferred to keep its surplus capital in land, thus bearing the full brunt of the losses sustained through the agrarian crises of 1806 and the 1820's when hundreds of estates found themselves without liquid assets and had to be auctioned off at great losses.²⁹² These were the people who now tried their luck with industrial shares.

The railroad speculation was in part the result of the government's refusal to get involved in the construction of a railway network. The reason was political, as the State Debt Edict of 1820 forbade contracting of loans which would have been needed. Rother was opposed to railroad construction per se and not prepared to circumvent the edict.²⁹³ Nevertheless, any state involvement, whether a guarantee of a corporation's dividend payments²⁹⁴ or granting a concession to a new corporation became a favorite target for stock manipulation. Once more, the public was afflicted with a fortune hunting mania.²⁹⁵

The capital required for speculation was often obtained by cancelling or withdrawing from other investments. The amount of Prussian agricultural bonds placed at the exchanges had not fallen so low in that century (Appendix F). Private mortgages were constantly foreclosed, often not without a loss, and whatever long term credit was available

could only be obtained from private banking houses who took advantage of the situation and usually demanded excessive high interest rates and immediate recall privileges. In cities where exchanges operated, mortgages could not be obtained at any price.²⁹⁶ In the meantime, the government showed itself quite unequal to the situation.²⁹⁷ In order to discourage investment in foreign stock, the Prussian government decreed in December, 1843, that Prussian railroad stock "becomes gilt-edged collateral agent at face value,"²⁹⁸ hoping to encourage domestic construction without getting involved itself financially.²⁹⁹ Consequently, the popularity of all railroad stock increased at once since the government failed to specify which companies had gained concessions. Thus, shares of questionable solidity found ready acceptance among the investment-hungry public.

Of course, the government soon recognized its negligence, and only two months later, in February, 1844, it attempted to check the speculation mania by warning the public not to buy shares of firms without state concessions to construct their lines.³⁰⁰ It hoped to ease the demand for short term credit in this way, by making illegal the purchase of stock through installment payment as well as the transaction of foreign railway stock at the Prussian exchanges.³⁰¹ But the latter was not entirely successful as foreign stock could be obtained at other German trade centers. Thus, even the Berlin Stock Exchange continued, with the tacit approval of the state, to trade these, albeit moderately compared with earlier years (Table 19). The immediate result of the public warning by the government in 1844 was a sharp decline in the value of domestic railroad stock and a slow-down, almost a standstill of construction. Further, the legislation through which the government

conformed its aversion toward joint-stock business ventures greatly weakened the trust in the legitimacy of all railroad corporations, and consequently their credit. Entrepreneurial spirit was dampened, and it was warned that this piece of legislation would greatly decrease the capital availability in future years,³⁰² a correct prognosis.

TABLE 19

TRADE ACTIVITY OF FOREIGN RAILROAD STOCK
AT BERLIN AFTER 1844^a

Name of Stock	Trade Activity
1. Amsterdam-Rotterdam Rwy. Co.	"Considerable but diminishing."
2. Jonction de l'Est (Belgian (Preferred)	The greatest percentage in Prussian private hands.
3. Dambre et Meuse (Belgian Common)	
4. Cracow-Upper Silesia (Austrian State paper)	A considerable portion in private hands.
5. Frankfurt-Hamburg Rwy. Co.	7/8 of total stock on the market held in private hands by the Berlin public.
6. Mecklenburg Rwy. Co.	Considerable purchase and trading.
7. Friedrich-Wilhelm Westbahn Rwy. Co.	The most active of all foreign stock. Some private banking houses at Berlin own as much as 100,000 worth.

^aBrockhage, pp. 211-12, quoting a number of contemporary exchange reports.

The shortage of money making itself felt after 1844 was often blamed on the demands made by railroad companies for capital which became fixed for a long time, thus not only depriving other branches of the domestic economy of funds needed for short-term credit, but also preventing any other large-scale investment projects.³⁰³ True, the values

of state and mortgage bonds continued to drop (Fig. 4), but lombard business at the Royal Bank increased while its deposit activity decreased (Appendix C). However, the latter was probably an induced development since the amount of deposits at the savings banks continued to increase (Table 6). There must be considerable further evidence suggesting that the capital shortage could not be blamed on railroad construction per se, as numerous official reports confirmed.³⁰⁴

In the meantime, as the amount of circulating money decreased, many outstanding installment payments contracted in the purchase of shares became delinquent, depressing the rates of exchange of railroad stock even further. The state ministry, in its usual manner, expressed the view that non-involvement of the government in the predicament of the companies would eventually rechannel some of the investment capital toward trade and industry and provide for a healthier economy.³⁰⁵ This did not prevent the government from safeguarding its interests in a possible future national railway network by officially guaranteeing a minimum rate of investment return of a number of selected corporations to the public for which the state received a voice in the management and in some cases options of purchase.³⁰⁶

The capital shortage thus retarded industrial and commercial development from 1844 on. It took the government another year to realize the seriousness of the situation when tax collections fell behind. In response to this desperate situation it accepted any commercial promissory note or bill of exchange as legal tender, incidentally sanctioning other papers of value as money substitutes.³⁰⁷

One should imagine that railroad construction would also have come to a standstill. Certainly annual investment declined (Fig. 7),

but operations continued to expand thanks to the ingenuity of the entrepreneurs and the capital reserves held in the form of foreign railroad stock. While the total railroad investment had increased in 1847 from one year earlier by only approximately 6 per cent, namely from 146 million to 155 million thaler, the use of reserve capital for construction purposes had increased by almost 120 per cent, from 37 million to 81 million thaler (Fig. 8 and Appendix H). Subsequent years showed similarly healthy increases. Thus, railroad stock remained a sound type of investment.

The history of available capital and circulating specie in post-Napoleonic Germany was guided by political, economic and personal motives. As we have seen, the Prussian government which had never experienced the effects of a prolonged shortage of capital proved itself unequal to the task of coping with the crisis of the mid-1840's. When it comes to the question of specie, the whole picture somewhat changes. Actually, except for the short period characterized by the influx of circulating currency, the result of sizable foreign loans such as the one contracted with Rothschild in 1818, specie substitutes had to take the place of legal tender. Government notes, bank deposit receipts (Bankendepositenscheine, Tresorscheine), bills of exchange, and a multitude of other papers of value circulated freely and, of course, formed the backbone of the trade activity at the stock exchanges. The most commonly used substitutes in circulation were Prussian Treasury Bonds (Staatsschuldscheine), their circulation having been extended throughout all parts of the kingdom in the 1820's. Unfortunately, their value did not extend beyond local wage payments and the payment of state taxes if one disregards their use as objects of speculation. After all, they were

not really more than promissory notes, and as such unsuited for the creation of capital. While on one hand the Prussian government did not want its notes to take on the characteristic of real money, it nevertheless took pains not to undermine the public's confidence in them. After 1824, it decreed that it would henceforth not accept its notes for conversion into specie.³⁰⁸

Who was to issue money during those years? Clearly, the state held the monopoly, yet the government's official bank of issue, the Royal Bank at Berlin, limited its function to manage the state trust funds and to carefully invest its assets in order to recover the huge deficit of previous years. As an asset to commerce and industry, in spite of its repeated declarations, the bank confined its activity to local needs.³⁰⁹ Its activities in other parts of the country were the cause of many complaints, especially from the Rhineland, but to suggest that this was in response to the wishes of the Berlin private banking houses³¹⁰ is to disregard Rother's antipathy toward them and his conviction that the institute had to operate first for the interest of the state. On the other hand, as most of the complaints originated in the western provinces of the Prussian Kingdom, it is interesting to note that the government's plans to establish a joint-stock bank of issue in Rhineland was vehemently and effectively opposed by the private bankers of this area.³¹¹ By the time railroad enterprises and a general increase of industrial and commercial activities made larger banking facilities necessary, the agitation for the establishment of a joint-stock bank became quite pronounced. The Prussian government was accused of negligence. In the meantime, Rother became the president of the Royal Bank, and he was adamant in preserving its privileges, among them the state

monopoly of issuing money. However, in response to the dissatisfaction of the Rhineland entrepreneurs, the local branch of the Royal Bank increased its activities, and local bankers and merchants began to rely on the bank's refinancing facilities. By 1846, the central banking policy became one of financial entrenchment, with the expected reactionary results among the business communities.

The root of the problem went deeper than Berlin's recent conservative financial policy, it was tied to the state's coinage policy which attempted to establish a uniform standard throughout the Hohenzollern territories. Non-Prussian coin was to be retired or driven from circulation through the government's manipulation of exchange rates. However, the success of the Prussian coin reform movement was consistently delayed because concomitantly, the western provinces were deprived of great sums of purchasing power. It was estimated that during the mid-1830's, more than ten per cent of the Rhineland's annual income left the area in the form of tax surpluses for Berlin.³¹³ In addition, approximately eight per cent of the province's supply of specie was held by the local government tax offices, even though this portion of the tax collection was to be recirculated. This practice aggravated the capital and specie shortage of the mid-1840's, it reduced the purchasing power by millions of thaler.³¹⁴

Opponents of Prussian monetary policies zeroed in on Rother. For eleven years after his appointment as president of the Royal Bank, he also handled the affairs of the Seehandlung and so more than once was involved in a conflict of interests. Foremost in opposition was Bülow-Cummerow. He had already in December of 1844 proposed that a bank of issue located at Berlin should issue notes of small denominations. Rother rejected this plan, not because he failed to recognize its necessity but

rather because he wanted to preserve the monopoly of issue for the state.³¹⁵ The same author also pointed out that the public as well as the business community opposed the continuation of the activities of the Seehandlung.³¹⁶ Even among Rother's closer associates were numerous critics. August Friedrich Bloch,³¹⁷ originally agent of the State Treasury at Königsberg, and after 1819 also of the State Debt Redemption Office and the Seehandlung, opposed Rother's banking policy as well as his management of the affairs of the trading corporation. For his critique, he was forced to retire from the civil service in 1845. The soundness of his opinions was confirmed when he became Rother's successor as director of the Seehandlung in 1848. His reorganization of the institute made it the successful enterprise that continued to exist until 1945.³¹⁸

Meanwhile, the president of the State Office of Commerce, the former ministry which in 1825 became a department of the Ministry of the Interior, Friedrich Ludwig von Rönne,³¹⁹ openly opposed Rother's procrastination in solving the financial crisis and strongly disagreed on his policy of discouraging the establishment of joint stock banks of issue. Carl Julius Bergius, State Councilor at Breslau and an influential political economist,³²⁰ wrote that the establishment of one or more banks of issue would not constitute any danger to the interests of the Royal Bank and the State.³²¹ Marcus Niebuhr, the author of the first comprehensive history of the Royal Bank, had always a high regard for Rother and enjoyed his confidence. He tempered the criticism and the objectional proposals by suggesting that the establishment of numerous branch offices of the Royal Bank throughout the country under the direction of local merchants and entrepreneurs might go far in alleviating the capital crisis.³²²

Obviously, it was feared that through a widespread association of capital, the state would be challenged in its handling of economic matters and thus lose control of economic development. Another factor influencing Prussian policy was the fear of West European Liberalism which had emerged triumphant in France and England, though of course, Frederic William IV was far more sympathetic to it than his late father ever had been.

The conservative fear proves a real influence, and evidence for it is found in Rhenish railroad politics. Two liberal leaders, David Hansemann and Ludolf Camphausen,³²³ engaged in controversy over the establishment of railway lines in the Rhineland. Final approval was given to Hansemann's proposal, not because his longer Cologne-Aachen line made more economic sense but rather because Camphausen's proposal for an Antwerp-Cologne line would have made the Rhineland become contaminated by "Belgian liberal views."³²⁴ This was only one of many incidents of the time.³²⁵ In the battle over obtaining government charters, many forms of pressure and persuasion were used. Patriotic denunciations of foreign influence was the most common.

Government resistance to economic expansion was, of course, not solely guided by bureaucratic opposition to it. The full significance of industrialization was misunderstood, resulting in a "provincial attitude toward economic and financial development" which frustrated Gustav von Mevissen and other Rhineland businessmen on more than one occasion.³²⁶ Evidently, Berlin mistrusted any new innovation which tended to lessen the control of the government over economic development. The Prussian bureaucracy was well aware, for example, that with easing of the restrictions regarding the incorporation of joint-stock enter-

prises, criticism of state policies would be encouraged.³²⁷ To the Prussian bureaucrat, criticism was synonymous with attack on authority.

Since the twelfth century, fiscal interests had determined the relationship between currency and finance.³²⁸ Now, modern economics emerged. The focus of government policy was to be the creation and preservation of a "sound" currency, one which would promote long-term economic planning. Even though it has its origin in the German economics of the eighteenth century,³²⁹ it was viewed as a "new philosophy" in the 1840's. The liberals of the day believed in the metallic definition of the currency units. Banks of issue were to regulate the rates of exchange. The history of German monetary policy testifies to the continuing reluctance of the German governments to give up their prerogatives and possibly also their concern with maintaining reserves against paper issues. The administration of money was also a profit to the state treasury. These considerations determined the outcome of the frequent conferences of the various German states, already common in the circles (Kreise) of the old Holy Roman Empire and continued in the nineteenth century for the purpose of unifying the German currency systems.³³⁰

Rother was faced with three basic problems, namely the lack of a central bank, the absence of joint-stock credit banks for the benefit of commerce and industry, and the shortage of circulating currency. Under his leadership, the Royal Bank increased its business turn-over, but the institute's assets proved inadequate in the 1840's. Business demanded that the bank consider the needs of the economy, a novel approach in government fiscal policy at the time. Questions were raised whether note-issuance would not increase the state debt and prove contrary to the restrictions imposed by the State Debt Edict of 1820. In other fields,

restrictive legislation, e.g., that of 1839 prohibiting civil servants from speculating in industrial stock, was already being ignored.³³¹

Frederic William IV accepted Rother's proposal and reformed the Royal Bank as decreed by the order of October 5, 1846.³³² Under Rother's central banking scheme it lived on and emerged as the Bank of Prussia (Preussische Bank). The new bank operated by having combined the principles of a joint-stock company with those of state authority. The basic investment belonged to private shareholders (four of the ten million thaler subscribed belonging to foreign investors³³³), "in order to prevent irresponsible actions of the minister of finance which could harm the bank's affairs," in the words of a Prussian historian.³³⁴ The state reserved itself the right to cancel private participation by re-purchasing the outstanding shares,³³⁵ but it had never made use of this provision.³³⁶ These private shareholders made up the Central Board (Zentralausschuss), while the ultimate administrative control of the institute rested with the Supervisory Council (Aufsichtsrat) whose members were appointed by the Crown. The structure was considered to be the acme of progress and of "old-Prussian correctness."³³⁷ Except for the issuance of notes, the activity of the institute and its policies remained much the same.

The new statute permitted the bank to issue notes of a total value of fifteen million thaler. In addition, another six million were issued for the purpose of withdrawing from circulation the various papers of value issued by the old Royal Bank. Prussia became the third German state to have established a bank of issue, after Bavaria where the Bayerische Hypotheken- und Wechselbank at Munich issued notes since 1836, and the Leipziger Bank of 1845 in Saxony (Table 20). From then

on, Prussia quickly assumed the lead in the emission of notes (Table 21), and these became one of the most stable currencies on the continent. Indeed, Germany, under the economic leadership of Prussia, was fast approaching a per capita monetary circulation equal to that of other European industrializing states (Table 22).

TABLE 20

BANK-NOTES ISSUED IN BAVARIA AND SAXONY 1836-1850^a

Year ^b	Bayerische Hypotheken- und Wechselbank ^c	Leipziger Bank ^d
1836	0.057	
1837	0.4	
1838	0.8	
1839	1.5	
1840	1.8	
1841	2.0	
1842	2.3	
1843	2.3	
1844	2.3	
1845	2.3	3.4
1846	2.5	...
1847	2.7	...
1848	2.7	7.0
1849	3.0	7.0
1850	3.6	8.6

^aHübner, II, 27, 33-35.

^bAs of Dec. 31st.

^cChartered July 1, 1834. Amounts converted according to the rate of 1 thlr. to 1.75 fl.

^dChartered March 1, 1839.

TABLE 21

GERMAN BANK-NOTE CIRCULATION 1846-1860^a
(monetary values in million of thaler)

End of period	In Germany			In Prussia			In Rest of Germany		
	Total	Metallic secured	i.e. %	Total	Metallic secured	i.e. %	Total	Metallic secured	i.e. %
1845 ^b	6.0	1.9	31.6	...	...	..	6.0	1.9	31.6
1851	34.1	1.9	5.5	?	?	?	?	?	?
1852	37.7	4.4	11.9	24.0	-1.3	0	13.7	5.8	42.3
1855	43.1	10.9	25.3	21.1	2.1	10.0	21.9	8.8	40.2
1857	100.2	38.0	38.0	71.7	33.0	46.0	28.5	5.5	17.5
1860	154.4	55.5	36.0	123.4	43.8	35.5	31.0	11.7	37.7

^aWagner, Zettelbankwesen, I, 202.

^bPrussia did not issue notes until late 1846 or early 1847. Cf. also infra, Table 23.

TABLE 22

PER CAPITA BANK-NOTE CIRCULATION IN EUROPE 1868^a
(in thaler)

Germany	5.9
North-German Confederation (excl. notes issued at Frankfurt-am-Main)	7.2
Prussia (excl. notes issued at Frankfurt-am-Main)	7.3
South Germany (incl. notes issued at Frankfurt-am-Main)	3.1
South Germany (excl. notes issued at Frankfurt-am-Main)	1.2
France	8.0
Great Britain and Ireland	7.6
England and Wales	8.7

^aWagner, Zettelbanken, I, 209.

CHAPTER VIII

THE CAPITAL CRISIS OF THE 1840's AND THE FAILURE OF REFORMS

There was nothing unusual about the conviction that speculation and inflation could be curbed by lowering state debts and regulating the various rates of exchange of papers of value in circulation. Such thinking was typical among mercantilistic policy makers.³³⁸ What was rather novel was Motz' and Rother's conversion schemes.³³⁹ Nevertheless, the relationship between bank notes and other papers of value, in fact the whole potential of properly secured paper currency was not understood (although it was asked whether a proper understanding would have made any difference in the course of events³⁴⁰). Papers of value that took the place of metallic currency during this period, the various cash and credit vouchers, drafts, bills of exchange, and bonds, had to have gold or silver backing, but bank notes did not. As soon as the market value of paper currency exceeded its nominal value, it acted as a bank note,³⁴¹ a situation which was greatly confusing to the fiscal and economic planners of this period and certainly not benefitting the developing economy of the country. Thus, one is hardly surprised to find that in spite of the loss of precious metals and hard currency during the years of the French occupation,³⁴² in spite of an increase of the population and the total production of the country,³⁴³ notwithstanding the capital drain by industry and through foreign investment--all facts the government was aware of--the amount of money in circulation was considered adequate for the

longest possible time while in fact the amount had not increased since 1806 (Table 23).³⁴⁴

TABLE 23

CURRENCY IN PRUSSIA 1765-1850
(in million of thaler)

Period	Metal Currency issued by the Royal Bank ^a		Notes in Circulation ^e	Estimated Total Circulation ^f
	minted	in circ.		
1765-86	100	...	...	...
to 1798	144	...	...	...
to 1806	195	...	9	200
to 1821	241	150 ^b	11	130
to 1834	...	...^b	17	143
to 1837	...	120 ^b	23.6	143
to 1840	271	100 ^c	...	160
to 1846	...	...^d	17.7	175
to 1848	301	150 ^d	...	...
in 1850 ^e	...	179	20.8 ^g	200 ^g

^aCompiled from data provided by JAS, II, 4-6; Zeitschrift des Vereins für Deutsche Statistik (Berlin), I (1847), 720-22; Hübner, I, 48-51. Cf. also HS, 507-13.

^bJAS, II, 4-6.

^cBergius, GeldBankwesen., p. 11.

^dA. Ziehl, Unsere Kredit-Verhältnisse und die Creirung neuer Circulationsmittel (Aachen, 1848), p. 6.

^eJAS, II, 188-95. These notes were fully covered by securities such as metals; cf. also supra, n. 341 and 344.

^fDie neuen Bankverordnungen in Preussen, pp. 6-8.

^gExcl. the newly issued notes of the Bank of Prussia; see also Appendix I.

The first newly issued notes of the Bank of Prussia were released sometimes during 1847, and at the end of this year, nearly twelve million thaler were to have been in circulation (Appendix I). However, in accord-

ance with the cabinet order of April 11, 1846, almost half of this replaced money substitutes issued by the former Royal Bank. It is not surprising that the increase of circulating tender was considered too little and too late.³⁴⁵ Indeed, it was the general consensus that Rother's reorganization of the state banking institute was rather too timid considering the economic demands. Notwithstanding some opposition among court circles to have reformed the bank at all, the foremost member having been the former Prussian minister Theodor von Schön,³⁴⁶ the basic objection to Rother's scheme focused upon the amount of notes issued. Bülow-Cummerow published a pamphlet in which he proposed the issuance of 200 million thaler, needed to rejuvenate the economy.³⁴⁷ The political economist Johann Karl Rodbertus-Jagetzow³⁴⁸ saw not so much the need of increasing the amount of issue, although he felt that anything less than 100 million thaler would be inadequate, but rather the establishment of more active banking institutes throughout Germany.³⁴⁹

Whether or not such drastic measures as proposed by Bülow-Cummerow would have benefitted the country in time to have averted the economic crisis of the latter half of the 1840's is, at best, speculative. However, one fact did emerge: the issuance of fifteen million thaler by the Bank of Prussia soon proved inadequate to meet the demands of trade as the events of the wool exchange of 1852 were to demonstrate.

Rother pointed out that the government had met the demands of the business community when the state permitted the establishment of joint-stock banks with note-issuance privileges of one million thaler through the second (but unpublished) cabinet order of April 11, 1846.³⁵⁰ Indeed, when the first Prussian United Legislative Assembly met the following year, there was no lack of proposals submitted, all of which were

duly discussed.³⁵¹ The final decision, however, was invariably a rejection of these by the upper house, the Herrenkurie, for a number of reasons. Either Prussia could not promote such enterprises within the confines of the Zollverein because of the anticipated objection of the other member states to such projects, or in case of a project for Berlin that the city already had such an institute and was therefore not in need of another. Finally, that banks of issue needed to have the notes secured by liquid assets and not by mortgages, as was also suggested privately on numerous occasions,³⁵² a condition the capital market of the time did not favor.³⁵³ Nothing much had really changed over the years.

In November, 1847, Rother submitted to the King a proposal for legislation in reference to the establishment of private banks of issue which is a masterpiece of bureaucratic narrowmindedness. His proposed restrictions would have made it literally impossible to have such projects approved had not the King rejected Rother's plan.³⁵⁴ Notwithstanding bureaucratic delaying tactics, the capital shortage made any successful subscription of shares at the stock exchanges unlikely. Those local organizations, e.g., the City Bank of Breslau, that came close to forming a company found themselves constantly battling with government officials over petty issues so that it was not possible to do more than plan a bank. The only bank which was launched was the Breslau institute which began to issue notes in 1848.³⁵⁵ Usually, the official stand of the government on applications for a bank charter was that the establishment of joint-stock banks would only encourage speculation and thus aggravate the currency and capital shortage.³⁵⁶

Government policy was still based on concepts which had developed in the pre-industrial past, namely that the state was much more intelligent

than private industry, and that "the country was really a vast royal estate to be administered on the king's behalf by the better-trained and more energetic heads of government departments."³⁵⁷ Yet Theodor von Schön, the former Prussian minister, saw things differently. On December 19, 1842, he wrote to Carl Julius Bergius that the civil service, especially the officials which were connected with financial matters, were ignorant to the point of lacking any fiscal and economic knowledge.³⁵⁸ One might add that they were well trained in law.³⁵⁹

In the meantime, the economy practically came to a standstill. The poor crops of 1846 and 1847 sent food prices skyrocketing and accentuated the already severe problem of poverty. It is for good reason that the 1840's were called the "hungry forties" and that the social reform literature of Marxism, anarchism, and "Bonapartism" made its debut. Meanwhile, industrial need for capital exceeded capital formation, and even periodic loans made to the entrepreneurs made it difficult if not impossible in most cases in industrial centers to keep employment constant. Furthermore, the shipment of goods had practically stopped.³⁶⁰

In order to alleviate the problem, the Cologne branch of the Prussian Bank increased the amount of money in circulation by 1.8 million thaler during March, 1848, this figure representing an amount over and above collected sums by the state. However, Rother ordered a stop to this practice as Berlin was being deprived of badly needed capital.³⁶¹ The authorities expressed the hope, when asked how they planned to cope with the anticipated popular unrest, that the military would guarantee the orderly conduct of the population.³⁶² In Berlin the monarch and his government were reported to be in a state of paralysis; nobody seemed to be agreed on economic issues.³⁶³

The crisis deepened. It was so serious that the old and respected Rhenish firms of A. Schaaffhausen and M. Stinnes had to discontinue meeting their payment obligations, and Krupp melted down the family silver to meet payroll commitments.³⁶⁴ Nevertheless, many firms were able to survive the crisis, and a few were even able to increase the number of employees and their production output.³⁶⁵ The crisis culminated in the revolution of 1848, yet as serious as it was, it had only a diverse regional impact. Statistical data seems to suggest that economic progress did not come to a complete standstill in all of Germany, and according to recent research, the crop failures of the years preceeding the revolution were not nearly as severe as has been claimed.³⁶⁶ There would have been enough to eat if transport facilities had been operating to their fullest capacities. Of course, too much capital remained tied up in consumer goods in storage, and available capital was insufficient for introducing a better transportation system. There existed no opportunity to liquidate other assets to meet needs.

The widespread fear of imminent revolutionary war, stimulated by overzealous patriots, had an adverse effect on the banks' deposits. Large amounts were withdrawn, forcing many private bankers to recall a number of loans from industry. Thus, instead of aiding the economy at a time of crisis, the banking institution in general affected it negatively, forcing many firms to become insolvent and eventually to declare bankruptcy. In any case, the whole credit structure throughout Germany practically collapsed overnight because of the sluggish response of the governments, especially the Prussian,³⁶⁷ to the economic necessities which at least from the 1830's on had demanded a more positive, certainly a more vigorous policy approach.

CHAPTER IX

CONCLUSION

After 1848, the social position of the aristocracy changed as they became increasingly dependent on the new and growing world of bourgeois finance. The bureaucratic preference to adhere to old doctrines led to those economic-political tensions which became a force of political magnitude to be reckoned with. A change was affected after 1848 not because the state began to make amends for its past mistakes but rather because it recognized that the forces of capital could be contained no longer. Further, it was considered the only possible way to smother political opposition if commerce and industry were actively encouraged. Finally, and perhaps more real as a motive for cooperation, both the conservative East Prussian and the liberal West Prussian feared the new danger, the "red democracy."³⁶⁸ Henceforth, we find that the bureaucrat of the state and the entrepreneur were to play a more cooperative role.

The two events which finally relegated all political considerations to second place were those of March 29, 1848, the bankruptcy of the banking house of A. Schaaffhausen which adversely affected 170 factories and some 40,000 workers, and David Hansemann's assumption of the ministry of finance in Berlin.³⁶⁹ By then, the economy needed millions of thaler if the country's progress over the last decades was not to be wiped out entirely.³⁷⁰ Even the most acute politician recognized that the questions of credit and revolution were now inseparately

interwoven. There was no more time for niceties, patriotic speeches, careful considerations. "We have to act with utmost dispatch," Mevissen wrote to his friend Hansemann in Berlin.³⁷¹ Hansemann was already responding by making several million thaler available to Berlin and Cologne manufacturers in order to alleviate the worst financial pressure. The Berlin manufacturers received two million thaler credit at four per cent, plus a further two million of State Treasury Notes for three months. The Cologne manufacturers received an immediate three million thaler, and on April 1, another two million.³⁷² Furthermore, Hansemann ordered the immediate establishment of various branch offices of the Prussian Bank throughout the kingdom in order to foster credit availability.

It was to be years before the economic damage was repaired. New problems constantly arose, each demanding a new, unproven solution. Although the decade of the 1850's was primarily characterized by the attempts to reestablish the old Prussian order, this was done not in opposition to industrial economic development. The success of these years came about through the conscious cooperation between the state and private enterprise. Furthermore, the government recognized that a measure of inflation is inevitable, even desirable in an industrializing economy,³⁷³ a tremendous step away from Rother's concept of a healthy economy. Whenever currency is the only liquid wealth as is the case in underdeveloped countries--its primary function being to facilitate commercial activities--, the governments' monetary policies become the most significant single factor in the controlling of inflation.³⁷⁴ How significant this factor really is became evident in the events that led to the German economic crisis of the late 1840's and to the economic boom of the following decade.

NOTES TO THE TEXT

¹Theodore S. Hamerow, Restoration, Revolution, Reaction: Economics and Politics in Germany 1815-1871 (Princeton, N.J., 1958), p. 138.

²StenBer., II, 1308. (Unless noted otherwise, translations are mine.)

³Wilhelm Wichmann, Denkwürdigkeiten aus der Paulskirche (Hanover, 1888), p. 139.

⁴Out of 2,223 (plus 11 unnumbered) motions and petitions submitted until Aug. 9, 1848, the day Senator Arnold Duckwitz/Bremen was appointed Reichsminister of Trade and Commerce, 548 submissions were referred to the Committee for Economic Affairs (hereafter referred to as CEcA), twice as many as to any other of the 15 permanent and 9 temporary committees. Bernhard Eisenstuck/Chemnitz pointed out that the mass of petitions and motions were concerned with two basic questions, the constitutional and the social problems of the country; StenBer., I, 69. See also StenBer., II, 1504.

⁵Report of the CEcA on the abolition of feudal obligations, tabled Oct. 3, 1848, StenBer., IV, 2389-2403. This report represents a summation of all the motions and petitions referred to the CEcA for study and recommendations. Although dealing primarily with agricultural matters, it also makes some interesting remarks regarding related economic fields.

⁶StenBer., VII, 5247.

⁷Testimony of August Becker at the trial of Pastor Weidig, accused of and actually involved in the editing, printing, and distribution of the pamphlet, reprinted in Büchner's Sämtliche Werke, ed. by Paul Stapf (Berlin, 1959), pp. 225-26.

⁸Karl Grünberg, Die Bauernbefreiung und die Auflösung des gutherrlich-bäuerlichen Verhältnisses in Böhmen, Mähren und Schlesien (2 vols.; Leipzig, 1894), I, 375-76.

⁹Cf. Werner Conze, "Das Spannungsfeld von Staat und Gesellschaft," Staat und Gesellschaft im deutschen Vormärz 1815-1848, ed. by W. Conze (Stuttgart, 1962), p. 248.

¹⁰August Heinrich Hoffmann von Fallersleben, Deutsche Galgenlieder. Michel (colloq.) is personification of the German people, usually portrayed with a sleeping cap.

¹¹"Die Bewegung von 1847," Karl Marx, Friedrich Engels, Werke, IV (Berlin, 1969), 502-3.

¹²Referring to the opening sentence of his "Communist Manifesto."

¹³Cited in Koppel S. Pinson, Modern Germany: Its History and Civilization (2d ed.; New York, 1966), p. 87.

¹⁴Stephen Born (1824-1898) was influenced by the writings of Marx and Engels. He met both of these during his travels prior to 1848. After the abortive May 1849 insurrection, he fled to Switzerland where he became journalist, interpreter, and professor at Basel university. He never partook in any other labor movement.

¹⁵See also Frolinde Balser, "Sozialdemokratie 1848/49: Die erste deutsche Arbeiterorganisation 'Allgemeine deutsche Arbeiterverbrüderung' nach der Revolution," Moderne deutsche Sozialgeschichte, ed. by Hans-Ulrich Wehler (Cologne, 1966), pp. 159-76; Hamerow, pp. 139-40; Rudolf Stadelmann, Soziale und politische Geschichte der Revolution von 1848 (Munich, 1948), pp. 162-68. A thorough analysis of working-class associations of this period is provided by P. H. Noyes, Organization and Revolution (Princeton, N.J., 1966). J. Wernicke, Der Kampf um den wirtschaftlichen Fortschritt: Ein kritisch-historischer Beitrag (Jena, 1910), pp. 82-89, examines the opposition of numerous organized and semi-organized groups of tradesmen toward the Stein-Hardenberg reforms, esp. toward the edict of Nov. 2, 1810, GS 1910, p. 79, known as the Trade-Profit Tax Edict which proclaimed freedom of trade.

¹⁶Wichmann, p. 4.

¹⁷Arnold Duckwitz, Denkwürdigkeiten aus meinem öffentlichen Leben von 1841-1866: Ein Beitrag zur bremischen und deutschen Geschichte (Bremen, 1877), p. 109. See also Conze, "Das Spannungsfeld...", pp. 225-26, 231-32. Duckwitz (1802-1881) was a self-educated man and a successful merchant of North-American furs and skins. He became a senator in 1841, and represented Bremen at the Frankfurt National Assembly in 1848, assuming the Reichsministry of Trade and Commerce in August, and subsequently the Ministry of Naval Affairs. In the latter capacity he created the first German Navy. Two years later, in 1850, he went to Erfurt, and in 1863, he participated in the Fürstentag at Frankfurt. He was elected mayor of Bremen twice, and he served as such from 1857 to 1863, and from 1866 to 1869. See also NDB, IV, 151-52.

¹⁸StenBer., I, 195. See also StenBer., I, 34, 69, 88-89, 195, all examples of similar expressions of concern. Cf. Conze, "Das Spannungsfeld...", p. 248.

¹⁹Cf. also Wilhelm Abel, Geschichte der deutschen Landwirtschaft vom frühen Mittelalter bis zum 19. Jahrhundert (2d rev. ed.; Stuttgart, 1967; hereafter referred to as GeschLandw.), p. 335, who draws attention to the fact that from the last decades of the 18th century, urban capital found its way into rural real estate speculation, resulting in a deplorable withdrawal of badly needed capital from the economy. One might add that this development impoverished many landowners and subsequently led to the establishment of the agricultural credit associations (infra, chap. iv). See also Friedrich Lütge, Deutsche Sozial- und Wirtschaftsgeschichte: Ein Überblick (3d enl. ed.; Berlin, 1966; hereafter referred to as DSWGesch.), pp. 410, 456-58, 502.

²⁰Hoffmann, Wachstum, p. 2. Wolfram Fischer, Der Staat und die Anfänge der Industrialisierung in Baden 1800-1850, Vol. I: Die staatliche Gewerbepolitik (Berlin, 1962; hereafter referred to as IndustrBaden.), p. 12, deplores such practices because they disregard the presence of Austria and therefore tend to mislead. On the other hand, Rondo Cameron in the introduction to Banking in the Early Stages of Industrialization (Oxford, 1967), p. 5, claims that statistical facts of other states which tend to contradict those of Prussia represent exceptions to a general economic trend.

²¹Leopold Krug, Geschichte der staatswissenschaftlichen Gesetzgebung im preussischen Staate (Berlin, 1808), p. 130. See also F. Lütge, Geschichte der deutschen Agrarverfassung vom frühen Mittelalter bis zum 19. Jahrhundert (Stuttgart, 1936; hereafter referred to as Agrarverfassung), pp. 188-92, and his DSWGesch., pp. 436-37.

²²W. Abel, Die drei Epochen der deutschen Agrargeschichte (2d ed.; Hanover, 1964; hereafter referred to as Epochen), pp. 93, 101-2; Graf Finck von Finckenstein, Die Entwicklung der Landwirtschaft in Preussen und Deutschland 1800-1930 (Würzburg, 1960), pp. 168-70; Conze, "Spannungsfeld...", pp. 254, 268-69; Lütge, DSWGesch., pp. 44-45.

²³W. O. Henderson, The Zollverein (Cambridge, 1939), pp. 10-11.

²⁴See Heinz König, "Ansätze und Probleme der Wachstumstheorie," Wachstum und Entwicklung in der Wirtschaft, ed. by H. König (Cologne, 1968), pp. 15-31, and the there listed bibliogr. references. W. A. Lewis, The Theory of Economic Growth (Homewood, Ill., 1955), offers a broad analysis of this problem.

²⁵Fischer, IndustrBaden., pp. 16-17; W. Conze, Die Strukturgeschichte des technisch-industriellen Zeitalters als Aufgabe für Forschung und Unterricht (Cologne, 1967), p. 26. The latter's "Das Spannungsfeld...", pp. 248-49, emphasizes change of the basic structure of German society as a concomitant development of industrialization.

²⁶König, pp. 16-20. Milton Friedman, The Optimum Quantity of Money and Other Essays (Chicago, 1969), pp. 5-7, offers an interesting illustration of this phenomenon.

²⁷Fischer, IndustrBaden., pp. 11-12, prefers to use three approaches when dealing with questions of economic growth. One is an analysis of economic cycles as expressed by empirical data, then an analysis of the various structural entities of the economy, and lastly an examination of that basis which determines the economic, social, and political order of the society, "the natural, geographical, historical, judicial, technical, social, political, and intellectual preconditions." Fischer's main concern is not the type of approach one wishes to follow, but rather that one does not lose the all-over view of a complex development.

²⁸Ibid., p. 16.

²⁹Ronald A. Shearer, "The Concept of Economic Growth," Kyklos, XIV (1961), 529-30. Cf. also Fritz Voigt in the Foreword to Sigurd Klatt, Zur Theorie der Industrialisierung (Cologne, 1959), p. 5.

³⁰Hans Rosenberg, Grosse Depression und Bismarckzeit: Wirtschaftsablauf, Gesellschaft und Politik in Mitteleuropa (Berlin, 1967), pp. 12-13. See also W. A. Cole, "The Growth of National Incomes," The Cambridge Economic History of Europe, Vol. VI: The Industrial Revolutions and After: Incomes, Population and Technological Change (Cambridge, 1965), pp. 2-3, 6, an article based on the author's conclusions of the research presented as British Economic Growth 1688-1959: Trends and Structure (2d ed.; Cambridge, 1967), written in collaboration with Phyllis Deane.

³¹Hoffmann, Wachstum, p. 14.

³²Cole, p. 2.

³³Carl Julius Bergius, Die Preussischen Gewerbegesetze (Leipzig, 1857; hereafter referred to as Gewerbegesetze), pp. 57-64; C. F. W. Dieterici, Über Preussische Zustände, über Arbeit und Kapital: Ein politisches Selbstgespräch (Berlin, 1848; hereafter referred to as Preuss. Zustände), p. 28; C. F. W. Dieterici, Der Volkswohlstand im Preussischen Staate: In Vergleichen aus den Jahren vor 1806 und von 1828 bis 1832, so wie aus der neuesten Zeit, nach statistischen Ermittlungen und dem Gange der Gesetzgebung aus amtlichen Quellen dargestellt (Berlin, 1846; hereafter referred to as Volkswohlstand), pp. 197-222; Hans Mauersberg, Deutsche Industrien im Zeitgeschehen eines Jahrhunderts: Eine historische Modelluntersuchung zum Entwicklungsprozess deutscher Unternehmen von ihren Anfängen bis zum Stand von 1960 (Stuttgart, 1966; hereafter referred to as Deutsche Industrien), pp. 38-52, 62-63; Gustav Schmoller, Zur Geschichte der deutschen Kleingewerbe im 19. Jahrhundert: Statistische und national-ökonomische Untersuchungen (Halle a.S., 1870; hereafter referred to as Kleingewerbe), chap. iii, and pp. 65, 71, 104, 148; Stadelmann, pp. 8, 198.

³⁴Abel, GeschLandw., pp. 343-45; Wernicke, pp. 82-89.

³⁵Abel, ibid.; Wernicke, ibid.; EVS, [I], 292.

³⁶K. Frhr. von Vincke, "Über die Bewegungen in den Jahren 1847 und 1848: Ungedruckte Briefe," ed. by Georg von Below, Deutsche Revue für das gesamte nationale Leben der Gegenwart, XXVII (1902), 100.

³⁷Kraft Prinz zu Hohenlohe-Ingelfingen, Aus meinem Leben: Aufzeichnungen, Vol. I: Vom Revolutionsjahr 1848 bis zum Ende des Kommandos in Wien 1856 (Berlin, 1897), pp. 5-7.

³⁸Ibid.

³⁹Reports of the CECA on German employment and working conditions submitted by Bruno Hildebrand/Marburg, StenBer., VII, 5285-68, and by Degenkolb/Eilenburg, StenBer., IX, 6362-71. For the various motions of

individual members of the Assembly, see Paul Albrecht, Die volkswirtschaftlichen und sozialen Fragen in der Frankfurter Nationalversammlung (Halle, 1914), pp. 8-13, 41-52. See also Schmoller, Kleingewerbe, pp. 84-85. Hamerow, p. 146, points out that the general opposition toward industrialization and economic liberalism by the artisans did not exist anymore in the Palatinate at this time because the petty shopkeepers and handicraftmen had already successfully adjusted to the new economic system. Cf. also Stadelmann, pp. 155-73, and Wernicke, pp. 82-89.

⁴⁰EVS, [I], 292. See also Dieterici, Volkswohlstand, p. 263, and his Preuss. Zustände, p. 14; Fischer, IndustrBaden., pp. 269-321; Ilja Mieck, Preussische Gewerbepolitik in Berlin 1806-1844: Staatshilfe und Privatinitiative zwischen Merkantilismus und Liberalismus (Berlin, 1965), pp. 207-39.

⁴¹Hoffmann, Wachstum, pp. 86-89, 103-7.

⁴²Max Nitzsche, Die handelspolitische Reaktion in Deutschland: Eine historisch-politische Studie (Stuttgart, 1905), pp. 36-7.

⁴³Erich Hoffmann, "Bevölkerungsentwicklung und Nahrungserzeugung," Urania Monatsschrift über Natur und Gesellschaft, XVIII (1954), 327-28; JAS, I, 271-78; Meitzen, II, 423-542, IV, 567-83; SZND, II, 858-964; Waltershausen, pp. 100, 118.

⁴⁴J. R. Cahill, Report to the British Board of Agriculture and Fisheries of an Inquiry into Agricultural Credit and Agricultural Cooperation in Germany (London, 1913), p. 75.

⁴⁵Die Württembergische Sparkasse in Stuttgart am Ende des neunzehnten Jahrhunderts: Eine Denkschrift aus Anlass der Einweihung des neuen Anstaltgebäudes im Dezember 1900 (Stuttgart, [1900]), p. 5.

⁴⁶Ibid., pp. 19, 40-42.

⁴⁷Ibid., p. 5. Appr. 200 thlr.

⁴⁸Lewis, pp. 225-26. Cf. also P. A. Baran and E. J. Hobsbawn, "The Stages of Economic Growth," Kyklos, XIV (1961), 234-42, who point out the fallacies of such assumptions, in particular reference to W. W. Rostow's The Stages of Economic Growth: A Non-Communist Manifesto (Cambridge, 1960), stating that "there is no departure ('take-off') of any kind--in the history of nature, of societies or of individuals--which cannot be thought of as being, preceded and followed by a number of 'stages'....His theory of 'stages' actually tells us nothing except that there are stages."

⁴⁹One for 4.5 inhabitants of Württemberg, for 4.1 of Prussia; Die Württembergische Sparkasse..., p. 6.

⁵⁰Ibid.

⁵¹Ibid.

⁵²Ibid., pp. 6, 8; also Cahill, pp. 75-77.

⁵³W. O. Henderson, The State and the Industrial Revolution in Prussia 1740-1870 (Liverpool, 1958; hereafter referred to as State), pp. 81-85, 113.

⁵⁴Hoffmann, Wachstum, p. 15. Fewer births and increased rate of deaths are the causes.

⁵⁵Ibid.

⁵⁶A consumer (i.e., non-capital) goods industry is defined as that industry of whose total production, at least 75 per cent are consumer goods. These are foodstuffs, textiles, leather goods, and furniture. Two-thirds of the net output of the industrial economy of the industrializing countries of the 19th century accounted for these goods; Walther G. Hoffmann, The Growth of Industrial Economics, translated by W. O. Henderson and W. H. Chaloner (Manchester, 1958; hereafter referred to as Growth), pp. 5-6, 8-17. While public consumption of power is also a consumer good, the real value remained too negligible for our purposes; ibid., pp. 14-15.

⁵⁷Ibid., p. 25.

⁵⁸Theorie der wirtschaftlichen Entwicklung: Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus (2d rev. ed.; Munich, 1926), p. 99.

⁵⁹The Trade-Profit Tax Edict of Nov. 2, 1810, GS 1810, p. 79, officially proclaimed the right of every citizen to engage in any occupation, thus extending the tax basis for the state. See also Ernst Klein, Von der Reform zur Restauration: Finanzpolitik des preussischen Staatskanzlers Karl August von Hardenberg (Berlin, 1965), pp. 100 et seqq., who suggests that Hardenberg did not resort to these measures because he believed in economic liberalism as did Frhr. von Stein, but rather because of fiscal necessity. The revision of this edict was promulgated Aug. 7, 1811, GS 1811, p. 263. See further, the Tariff Law (the "Maassen Tariff" after its mentor, K. G. von Maassen) of May 26, 1818, GS 1818, p. 65, pronouncing that "all foreign natural and manufactured goods may be imported, consumed or be transported [through the Prussian territories] without restrictions; domestic natural or manufactured goods may be exported." Thus, at least in Prussia, Adam Smith's doctrine of laissez-faire was not a theory for discussion but rather government policy. See also Henderson, State, p. 91; Hoffmann, Growth, p. 72; Mieck, pp. 15-21; Wernicke, pp. 79-82. For a contemporary view see Friedrich List, Gesammelte Schriften, Vol. III: Das nationale System der politischen Oekonomie, ed. by Ludwig Häusser (Stuttgart, 1850), pp. 101-5.

⁶⁰Hoffmann, Growth, pp. 2-4, distinguishes between "stages of economic development" and "historical phases of industrialization." The first is determined by the relationship between the output of consumer and capital goods, the latter by the relationship between the rates of growth of industries within the manufacturing sector of the economy. Stage I has a ratio of 5(±1):1, i.e., the net output of the consumer

goods industries is five times as large as that of the capital goods industries; Stage II a ratio of 2.5(\pm 1):1; Stage III a ratio of 1(\pm 0.5):1; Stage IV a lower level yet.

⁶¹Ibid., pp. 2-4, 17-23, 67-74, 84.

⁶²Ibid., p. 4.

⁶³One needs only to compare the German with English credit opportunities during the first stages of industrialization. See P. Deane, The First Industrial Revolution (Cambridge, 1967), pp. 152-85; Deane and Cole, pp. 259-77; Richard Tilly, Financial Institutions and Industrialization in the Rhineland 1815-1870 (London, Mad., 1966; hereafter referred to as Financial Institutions), pp. 7-9.

⁶⁴Joseph Hansen, Gustav von Mevissen: Ein rheinisches Lebensbild 1815-1899 (2 vols.; Berlin, 1906), I, 336-37; Waltershausen, p. 100.

⁶⁵Testimony of Kirkman Finlay, merchant of cotton goods, before the Select Committee on Manufactures, Commerce, and Shipping, PP/HC, 1833, Vol. VI (Reports, vol. 2), pp. 37-38, 70-77; Testimony of Grenville Withers, engineer and machinist, before the Select Committee on the Exportation of Machinery, PP/HC, 1841, Vol. VII (Reports, vol. 4), pp. 42, 71-74. In 1868, A. Biengräber, Statistik des Verkehrs und Verbrauchs im Zollverein für die Jahre 1842-1864, nach den veröffentlichten amtlichen Kommerzial-Uebersichten etc. dargestellt (Berlin, 1868), observed that "our machine building establishments have now reached such a state of perfection that they not only meet the home demands but are often also busy on foreign orders." (Translated by W. O. Henderson.) See also W. O. Henderson, Britain and Industrial Europe: Studies in British Influence on the Industrial Revolution in Western Europe (Leicester, 1965; hereafter referred to as Britain), pp. 139-66.

⁶⁶Hoffmann, Growth, p. 84; Hoffmann, Wachstum, pp. 12-21, 67-78.

⁶⁷Hoffmann, Growth, p. 3.

⁶⁸Hoffmann, Wachstum, p. 172; Waltershausen, pp. 53-54.

⁶⁹Hoffmann, Wachstum, pp. 172, 196-97. For Prussia and the states of the Zollverein individually, see HS, pp. 378-406, 418-49; SVV, I, 383-402; SZND, III, 561-70; ZSB, I (1861), 51. Dieterici statistically recorded the male population of 14 years and over, Viebahn of 15 years and over. Note that during the years between 1829 and 1834 as well as between 1842 and 1859 (with the exception of 1845), the annual net increase of the population was below 1 per cent, making the assumption that an exceptional number of persons had reached their 14th or 15th birthday during the years of the highest increase of employment in the processing industries (the annual increase here having been ca. 3 per cent between 1846 and 1849) erroneous.

⁷⁰For German statistics from 1837 on, see K. A. Müller, pp. 44, 52-69; For Zollverein, see SVV, I, 38-73, and II, 41-121.

⁷¹Lütge, DSWGesch., p. 502, admits the increased demands of consumer goods, but he also points out that most of the industrial labor force remained behind the average national consumption; cf. also ibid., p. 419, where he speaks of the increase of production in response to demand, bringing about a general rise in the standard of living, a conclusion somewhat contradictory to the earlier one.

⁷²A relative early change toward modern farming techniques was noted in northern Germany, an area influenced by Dutch and English husbandry, by the agronomist Albrecht Thaer; Communications to the Board of Agriculture, Vol. I, Pt. 4, pp. 379-84. An interesting account on conditions of two decades later is Thomas Hodgskin's Travels in the North of Germany, describing the Present State of the Social and Political Institutions particular in the Kingdom of Hannover (2 vols.; Edinburgh, 1820), II, 77-92. The role of state officials in agricultural reforms is examined by Henderson, State, pp. 82-83, in reference to the efforts of the at that time president of the district (Regierungsbezirk) of Erfurt/Saxony, Friedrich Christian Adolf von Motz (1775-1830), during the years between 1817 and 1821 (see also ADB, XXII, 408-10), and by Helen P. Liebel, "Der Beamte als Unternehmertyp in den Anfangsstadien der Industrialisierung," Entstehung und Entwicklung der modernen Gesellschaft: Festschrift für Hans Rosenberg, ed. by G. A. Ritter and W. Sauer (Berlin, 1970), pp. 246, 248-52, 257-59, in reference to the efforts of the Württemberg official Johann Friedrich Müller (1718-1780) on the eve of the French Revolution.

⁷³Helmut Böhme, Frankfurt und Hamburg: Des Deutschen Reiches Silber- und Goldloch und die allerenglischste Stadt des Kontinents (Frankfurt-am-Main, 1968; hereafter referred to as FfmHbg.), p. 166; Hans Mauersberg, Wirtschafts- und Sozialgeschichte zentraleuropäischer Städte in neuerer Zeit (Göttingen, 1960; hereafter referred to as WirtGesch.), pp. 48, 54, 63-64, 71-74.

⁷⁴Böhme, FfmHbg., p. 149; Lütge, DSWGesch., p. 425; Mauersberg, WirtGesch., p. 368.

⁷⁵Folke Dovring, "The Transformation of European Agriculture," The Cambridge Economic History of Europe, Vol. VI: The Industrial Revolutions and After: Incomes, Population and Technological Change (Cambridge, 1965), p. 603. From the latter part of the 18th century on, the western European agrarian and commercial civilization was in a process of dissolution. Because Germany lacked a single national framework, any changes in the economic and social structures were realized more gradually here than elsewhere; see the summary of this development in Helen P. Liebel, Enlightened Bureaucracy versus Enlightened Despotism in Baden 1750-1792 (Philadelphia, 1965), pp. 5-12.

⁷⁶Supra, n. 72; see also StenBer., IV, 2389-2403, and Lütge, DSWGesch., pp. 455-71.

⁷⁷Dieterici, Volkswohlstand, p. 12. See also supra, p. 14.

⁷⁸Finckenstein, pp. 81-90; Theodor Frhr. von der Goltz, Geschichte der deutschen Landwirtschaft (2 vols.; Stuttgart, 1903), II, 170-77, 218-74; Lütge, DSWGesch., pp. 441-42. Gustav von Gülich, Geschichtliche

Darstellung des Handels, der Gewerbe und des Ackerbaus der bedeutendsten handeltreibenden Staaten unserer Zeit (5 vols.; Jena, 1830-45), IV, 343-44, 576-633.

⁷⁹Meitzen, II, 515. Also Verhandlungen des Vereins zur Beförderung des Gewerbefleißes in Preussen (20 vols.; Berlin, 1821-1840), V, Table A following p. 205; Georg Wilhelm von Viebahn, Über Leinen- und Woll-Manufakturen, deren Ursprung, Umfang und Leistungen in Deutschland, deren Werth und Fortschritte (Berlin, 1846), pp. 31-51, 55.

⁸⁰SZND, II, 858-964; Lütge, Agrarverfassung, pp. 226-28; Waltershausen, p. 118. An excellent cartographical presentation of agricultural production concentration is provided by Meitzen, Atlas (suppl.), plates V, XVII, XVIII, and his description, II, chaps. xxviii-xxxii.

⁸¹Edict of Oct. 9, 1807, GS 1807, p. 281; Royal Declaration of July 27, 1808, and April 8, 1809; Edict of Sept. 14, 1811, GS 1811, p. 300; Royal Decl. of April 29, 1816, GS 1816, p. 154; Laws of June 7, 1821, GS 1821, p. 53. See also Goltz, II, 132-64, 178-211.

⁸²Goltz, II, 173-75. See also Cahill, pp. 11-13, 38-54, on the importance and the development of the land credit associations (Land-schaften) in this connection. Lütge, DSWGesch., p. 439, points out that the peasant-farmer was excluded from using the services of agricultural credit associations. For a modification of this view, see infra, chap. iv.

⁸³StenBer., IV, 2395; Johann Gottfried Elsner, Landwirtschaftliche Reise durch Schlesien, nebst einigen Ausflügen nach der Mark Brandenburg, Sachsen, Mähren und Oesterreich, in Briefen beschrieben (4 vols.; Breslau, 1823; Berlin, 1825), II, 82-84, who was a successful sheep farmer and breeder in Silesia and therefore well qualified to report on agricultural matters; Lütge, DSWGesch., pp. 424-25.

⁸⁴"Das Ergebnis der Getreideernten im neunzehnten Jahrhundert, besonders in Beziehung auf England und auf Norddeutschland," DVS, XXXVII (1847), Heft 2, 1-19, a contemporary account of crops and yields; Lütge, DSWGesch., pp. 456-57.

⁸⁵The extent of the opposition of the landowners throughout the reform years was recorded in Count Schlieben's report of July 17, 1811, addressed to Chancellor Hardenberg, reprinted in Georg Friedrich Knapp, Die Bauernbefreiung und der Ursprung der Landarbeiter in den älteren Teilen Preussens (2 vols.; Leipzig, 1887), II, 270-74, and in the report of Ostpreussisches Generallandschaftsdirektorium to the Prussian Ministry of Agriculture of Nov. 16, 1822, reprinted in Finckenstein, pp. 128-29. Goltz, II, 170-72, justifies the opposition of the landowners in terms of unavailable capital and inability to cope with the technical and organizational demands made by the prevailing economic situation.

⁸⁶How interdependent the landlord-peasant relationship really was is reported by C. W. Zimmermann (Nov. 22, 1810), reprinted in Knapp, I, 330-32.

⁸⁷Frieda Wunderlich, Farm Labor in Germany 1810-1945: Its Historical Development within the Framework of Agricultural and Social Policy (Princeton, N.J., 1961), p. 23, points out that migration resulted from excess population of rural areas, at least in its initial stages. Further, "Peasants' children and farm workers were the most mobile groups of the rural population....Industry picked the young and the strong and left the less desirable for the farm supply." Cf. also Lütge, DSWGesch., pp. 420-21.

⁸⁸Cf. also Lütge, Agrarverfassung, p. 228. In Prussia, the idea of bringing virgin land under cultivation through drainage and dike construction projects dates back into the 18th century. However, the Napoleonic Wars stopped any state assistance for these. Furthermore, the state's policy of self-help in line with Adam Smith's laissez-faire philosophy (but because of necessity) began to influence subsequent legislation in this matter. The Prussian codified law (Allgemeines Preussisches Landrecht) of 1794 decreed that even where state interests were of prime concern with regard to navigation of rivers, to dams, locks, etc., owners and residents of adjoining lands needed to be consulted so that they would not be discriminated against (Pt. I, art. viii, pars. 99ff.; Pt. I, art. ix, pars. 170ff.; Pt. II, art. xv, pars. 38ff., 63ff., 229ff.). However, only the edict of Sept. 14, 1811 (Edict for the Advancement of Agriculture), GS 1811, p. 300, stipulated that a rigorous amelioration of non-productive land was henceforth to belong "to the great and useful enterprises," to be undertaken by individuals and, if the owners did not have the means, through state assistance; see also Law of Nov. 15, 1811, GS 1811, p. 352; Law of March 29, 1808, GS 1806-10, p. 12; Edict of Oct. 28, 1810, GS 1810, p. 95, all concerned with these matters. Reforestation of areas unsuitable for agricultural use begun in earnest and in a systematic manner in 1841, although a program of reforestation was already in existence since the reign of Frederic II (the Great); Meitzen, I, 441-72, II, 119. In the final analysis, the Prussian state, in spite of all this fanfare, supported the amelioration program with 3,328,768 thlr., of which 1,555,360 thlr. remained unpaid, leaving 1,773,408 thlr. The total cost was 15,945,831 thlr. until 1866. Therefore, the state contributed only 11% of the capital; or, in other words, since the cost was per morgen 5 thlr. 13½ sgr., the state only paid 17-3/4 sgr.

⁸⁹Abel, GeschLandw., p. 345; Finckenstein, pp. 15022; Lütge, DSWGesch., pp. 422-25; SZND, II, 858-964.

⁹⁰Hoffmann, Growth, p. 36.

⁹¹GeschLandw., p. 345. Cf. also Friedrich Bülow, Der Staat und die Industrie (Leipzig, 1834), pp. 49-57, who recognized that there existed a food shortage in many sections of the country while in others a food surplus; he attributed this to poor distribution.

⁹²Lütge, DSWGesch., p. 421.

⁹³Oscar Handlin, "The Modern City as a Field of Historical Study," The Historian and the City, ed. by O. Handlin and John Burchard (Cambridge, Mass., 1967 [c1963]), p. 2.

⁹⁴Böhme, FfmHbg., pp. 49-107; Mauersberg, WirtGesch., pp. 80-92.

⁹⁵Handlin, p. 2-3.

⁹⁶Böhme, FfmHbg., pp. 109-95; Mauersberg, WirtGesch., pp. 152-69.

⁹⁷Böhme, FfmHbg., pp. 144-95; Geschichte der Handelskammer zu Frankfurt a.M. 1767-1908 (Frankfurt-am-Main, 1908; hereafter referred to as GeschHKFfm.), pp. 78-89.

⁹⁸Duckwitz, pp. 7-61; also supra, n. 74, and GeschHkFfm., pp. 88, 331.

⁹⁹Supra, n. 75.

¹⁰⁰J. J. Rousseau Emile ou de l'education (1856) l. 36. See also Böhme, FfmHbg., pp. 49-53.

¹⁰¹Handlin, pp. 17-20.

¹⁰²Hoffmann, Wachstum, pp. 178-80.

¹⁰³Here we encounter Karl Marx' differentiation between "fixed" and "circulating" capital, and that of total net product into "means of production" and "means of consumption." Das Kapital: Kritik der politischen Ökonomie, Vol. II: Der Zirkulationsprozess des Kapitals, ed. by Friedrich Engels, re-edited by the Marx-Lenin-Engels-Institute, Moscow, 1932 (5th ed.; Berlin, 1955), pp. 151-52, 293.

¹⁰⁴In contrast see Henderson, Britain, pp. 2, 139-66, passim, and his The Industrial Revolution on the Continent: German, France, Russia 1800-1914 (London, 1961), p. 12, where he attempts to explain that the genesis of the German industrial revolution is to be found in the last half of the 18th century because of the increasing involvement of the state in creating industrial enterprises, of the advances in technical knowledge by German scientists, and the influence of British production methods. Cf. also W. W. Rostow's theory that industrial expansion is necessarily preceded by a brief period of rising investment which coincides with a rapid advance in production techniques, thus placing the beginning of the German industrialization into the 1850's; The Process of Economic Growth (2d ed.; New York, 1962), pp. 102-5, 174-106. See also the critical response to this theory in The Economics of Take-Off into Sustained Growth (London, 1963), and supra, n. 48.

¹⁰⁵Henderson, State, pp. 96-118, in reference to the Prussian Technical Institute. See also Friedrich Trost, "August Borsig 1804-1854," Die grossen Deutschen: Deutsche Biographie, ed. by Hermann Heimpel, Theodor Heuss, and Benno Reifenberg (5 vols.; Berlin, 1956), III, 258-66; JAS, I, 293-303, 365-66, 436.

¹⁰⁶Economic Backwardness in Historical Perspective: A Book of Essays (Cambridge, Mass., 1962), p. 8.

¹⁰⁷Ibid., p. 31.

¹⁰⁸Ibid., p. 45.

¹⁰⁹Otto Hübner, Die Banken (2 vols.; Leipzig, 1854), II, 49-51; Heinrich von Poschinger, Bankwesen und Bankpolitik in Preussen (3 vols.; Berlin, 1878-79), I, 128-29; Carl Julius Bergius, Grundsätze der Finanzwissenschaft mit besonderer Beziehung auf den Preussischen Staat (Berlin, 1865; hereafter referred to as Grundsätze), pp. 223-44.

¹¹⁰Royal Edict of March 29, 1764, NCC III, para. 381, decreed that 14 thlr. Prussian Courant must contain 1 Cologne mark of fine silver. One thlr. was to equal 24 sgr., each sgr. 12 pfg. After 1826, as decreed in 1821, GS 1821, p. 159, and AKO of Oct. 25, 1825, GS 1825, p. 227, each thlr. was to consist of 30 sgr., and each sgr. of 12 pfg., although the "14 thlr. standard" was maintained.

¹¹¹Carl William Hasek, The Introduction of Adam Smith's Doctrines into Germany (New York, 1925), pp. 26, 30-32; Mauersberg, Deutsche Industrien, pp. 26-27.

¹¹²"Edict and Reglement der Königlichen Giro- und Lehn-Banco zu Berlin," of June 17, 1765, reprinted in Marcus Niebuhr, Geschichte der Königlichen Bank in Berlin: Von der Gründung derselben (1765) bis zum Ende des Jahres 1845 (Berlin, 1854; hereafter referred to as GeschKglBank.), Appendix V; further regulations to this end were "Sr. Königl. Majestät in Preussen allergnädigste Octroy, für die in Berlin zu errichtende Giro- und Wechsel-Banque de Dato den 23. September, 1753," in Niebuhr, ibid., Appendix I; "Declaration vor die Compagnie der sich allhier etablirenden Banque, worinnen noch ein und andere Punkte näher bestimmt werden. Berlin, den 17ten December, 1764," in Niebuhr, ibid., Appendix III; "Revidirtes und Erweitertes Edict, und Reglement der Königlichen Giro- und Lehn-Banquen zu Berlin und Breslau. De Dato Berlin, den 19ten October, 1766," in Niebuhr, ibid., Appendix IX. The last remained the statute by which the bank operated until its reorganization and reconstitution in 1846.

¹¹³Subsequent guarantees were those of Oct. 29, 1766, NCC IV, p. 4041, pertaining to the deposits of state agencies, of Nov. 1, 1768, NCC IV, p. 5033, pertaining to deposits of private persons, and of March 31, 1769, NCC IV, p. 5541, pertaining to the deposits of churches, schools, and charitable organizations.

¹¹⁴Niebuhr, GeschKglBank., pp. 30-38; Poschinger, I, 128-30.

¹¹⁵Royal Instruction of July 18, NCC IV, p. 4035.

¹¹⁶Royal Instruction of March 31, 1769, NCC IV, p. 5535.

¹¹⁷"Allerhöchste Order" of Dec. 25, 1777, "Allerhöchste Order" of Dec. 30, 1786, and Publikandum of Jan. 1, 1887.

¹¹⁸Poschinger, I, 129.

¹¹⁹Ibid., I, 128-30; also Hasek, p. 31.

¹²⁰The Prussian Minister Karl August von Struensee (1735-1804) was of the opinion that the bank's primary function, in spite of its statutory limitations, was to be a source of income and credit for the state; Abhandlungen über wichtige Gegenstände der Staatswirtschaft (3 vols.; Berlin, 1800), I, 412-25. For a biographical account of the minister, see ADB, XXXVI, 661-65.

¹²¹Niebuhr, GeschKglBank., pp. 56-57. Niebuhr concluded that Schulenburg-Kehnert opposed so vigorously Frhr. von Stein's proposal for the establishment of a private bank of issue with extensive facilities for lombard credit because of this very attitude; ibid., pp. 57-58.

¹²²Area annexed by Prussia as a result of the 3rd partition of Poland in 1795.

¹²³Niebuhr, GeschKglBank., p. 11.

¹²⁴Poschinger, I, 142.

¹²⁵Niebuhr, GeschKglBank., pp. 99-105.

¹²⁶Ibid., p. 5.

¹²⁷AKO of Nov. 3, 1817, GS 1817, p. 289; GS 1817, p. 295.

¹²⁸Niebuhr, GeschKglBank., pp. 230-31.

¹²⁹Balance sheet of the bank, reprinted in Niebuhr, ibid., Appendix XVIII.

¹³⁰Ibid., p. 1.

¹³¹GeschHkFfm., pp. 369-73, 386-403, an extensive account of the Prussian influence in this part of Germany prior to the establishment of the Zollverein.

¹³²Arnold H. Price, The Evolution of the Zollverein: A Study of the Ideas and Institutions leading to German Economic Unification between 1815 and 1833 (Ann Arbor, 1949), p. 117.

¹³³See Henderson, State, pp. 84-85, in reference to Friedrich von Motz' attitude toward economic particularism.

¹³⁴Decree of Dec. 5, 1785, cited by Poschinger, I, 158.

¹³⁵Poschinger, I, 160.

¹³⁶Bergius, Grundsätze, pp. 225-33; Henderson, State, pp. xviii-xix, 48-49, 71, 119-49, 167, 175; Helen P. Liebel, "Laissez-faire vs. Mercantilism: The Rise of Hamburg & The Hamburg Bourgeoisie vs. Frederic the Great in the Crisis of 1763," Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, LII (1965), 229ff.

¹³⁷Supra, n. 120, indicating Struensee's idea of the purpose of a crown corporation, irregardless of any other considerations.

¹³⁸Poschinger, I, 146-47.

¹³⁹Tilly, Financial Institutions, p. 13.

¹⁴⁰Ernst von Bülow-Cummerow, Die Taxen und das Reglement der landwirtschaftlichen Creditvereine nach ihren notwendigen Reformen (Berlin, 1847; hereafter referred to as Taxen), pp. 1-2, 4 75-76, 83-84.

¹⁴¹Ibid., pp. 72-77, 84-85; E. von Bülow-Cummerow, Politische und finanzielle Abhandlungen (2 vols.; Berlin, 1844-55; hereafter referred to as Abhandlungen), II, 3. The ministers Ernst K. W. L. von Bodelschwingh (1794-1854) and Heinrich E. von Flottwel (1786-1865) informed the King on May 22, 1846, that the construction of railroads did not withdraw capital from agriculture and manufacture; Bernhard Brockhage, Zur Entwicklung des preussisch-deutschen Kapitaleexports, Vol. I: Der Berliner Markt für ausländische Staatspapiere 1816 bis um 1840 (Leipzig, 1910), p. 213. Bodelschwingh belonged to Westphalian aristocracy; he retired in 1848 shortly before the revolution as Minister of the Interior because of his criticism of the court (NDB, II, 350-51). Flottwell's ancestors were East Prussian academicians, merchants and civil servants. He studied under Kant in Königsberg, and was hired by Theodor von Schön, alumnus of Königsberg University. In 1848, he sat as a member for Posen at the Frankfurt National Assembly, in 1849 in the Prussian National Assembly. In 1850 he was appointed president of the province of Brandenburg, and in 1858, he became Minister of the Interior (NDB, V, 257-58).

¹⁴²Bülow-Cummerow, Taxen, p. 84. He is incorrect in this assumption. His proposals and those of other reformists were considered, especially during the meetings of the State Office of Commerce (Handelsrat), a section of the Finance Ministry, which was at that time under the presidency of Friedrich Ludwig von Rönne (1798-1865), formerly from Glückstadt/Holstein, Officer-Cadett of the German-English Legion at the Battle of Waterloo and vehement opponent of state interference in the development of railroads and the chartering procedures of industrial corporations. In 1848, he became emissary in Washington. ADB, XXIX, 133-36. In December of 1845, the members of the committee, the state ministers Rother, von Thile, von Bodelschwingh, Uhden, von Canitz, and the president of the board of governors of the Royal Bank, von Lamprecht, all decided in favor of a reconstitution of the Royal Bank, allowing private persons to participate in the decision making of its administrative body as well as permitting the new bank to issue notes. The AKO of April 11, 1846, GS 1846, p. 153, confirms the decision of the committee, a matter which could not have escaped Bülow-Cummerow's attention. See also by the same author, Das Bankwesen in Preussen mit Bezug auf die Cabinetsordre vom 11. April 1846 (Berlin, 1846; hereafter referred to as Bankwesen). B.-C. (1775-1851), from Mecklenburg, settled in 1804 in Pomerania where he achieved wide recognition for his agricultural management practices. Soon after to become a leading voice in provincial affairs, he together with Rother in 1811 sat on the War Debt Commission. He admired Hardenberg's social legislation which complimented his views on peasant emancipation, private enterprise, and decentralization of government. Con-

sequently, his conservative colleagues considered him a liberal. His critique of state fiscal management resulted in many financial reforms, the foremost the reconstitution of the Royal Bank in 1846. ADB, III, 517-20.

¹⁴³Cf. Poschinger, I, 261-66, and also the report of the Royal Agricultural Economic Council (Königliches Landes-Ökonomie-Kollegium) of 1861, ZSB, XV (1875), 337.

¹⁴⁴Cahill, p. 7.

¹⁴⁵GS 1815, p. 99; cf. also Hübner, II, 65; Meitzen, II, 16.

¹⁴⁶AKO of December 13, 1821, GS 1821, p. 213; AKO of Sept. 13, 1832, GS 1832, p. 215; AKO of Dec. 26, 1832, GS 1833, p. 2.

¹⁴⁷Goltz, II, 172; Meitzen, III, 133.

¹⁴⁸For Pomerania, AKO of Dec. 10, 1837, GS 1837, p. 171; for East Prussia, AKO of Dec. 21, 1837, GS 1837, p. 223; For West Prussia, AKO of Feb. 24, 1838, GS 1838, p. 94; For Silesia, AKO of May 20, 1839, GS 1839, p. 169. A conversion did not take place for the Posen institute. However, AKO of Apr. 15, 1842, GS 1842, p. 180, which renewed the function of the respective credit institute for another 5 year term decreed that the association was to issue bonds henceforth at a basic rate of interest of 3½%. The bonds of the Kur- and Neumark Association remained unaffected by the conversion legislation.

¹⁴⁹The Silesian Mortgage Credit Association Regulation (Schlesisches Landschaftsreglement) of July 9, 1770, became the model for later constitutions of credit institutes of this nature. It read in part, "Holders of agricultural mortgage bonds (Pfandbriefinhaber) can never be involved in bankruptcy procedures since they will obtain their credit only from the associations [Landschaften].....All bonds are to be considered of equal quality, enjoying equal rights, they can therefore circulate freely among the public without requiring to be assigned, endorsed, etc." Cited in Georg A. W. Korn, comp., Schlesische Ediktsammlung 1770 (Breslau, 1870), p. 162. Cf. also Hübner, II, 52-54.

¹⁵⁰Cahill, p. 38; Hübner, II, 57-59.

¹⁵¹Declaration of Sept. 8, 1791, cited in Korn, p. 93.

¹⁵²Meitzen, III, 132.

¹⁵³Cahill, pp. 38-39; Hübner, II, 50-51; Meitzen, III, 131-32.

¹⁵⁴ALR, par. 83, Pt. II, art. vi.

¹⁵⁵Supra, n. 23.

¹⁵⁶Declaration of Dec. 24, 1808; see Meitzen, VI, 394.

¹⁵⁷Meitzen, I, 239-47.

¹⁵⁸Hübner, II, 405.

¹⁵⁹GS 1857, p. 326; GS 1858, p. 525; GS 1859, p. 575.

¹⁶⁰GS 1857, p. 344.

¹⁶¹Meitzen, I, 239-47.

¹⁶²Ibid., IV, 223.

¹⁶³Heinrich von Treitschke, Deutsche Geschichte im Neunzehnten Jahrhundert (6th ed.; 5 vols.; Leipzig, 1906-8), V, 502-3; Poschinger, I, 263.

¹⁶⁴Bülów-Cummerow, Steuern, pp. 85-86.

¹⁶⁵Art. i, Statute of the Nassau District Mortgage Credit Bank (Nassauische Landeskreditkasse) of 1840, cited by Cahill, p. 64.

¹⁶⁶Cahill, p. 58.

¹⁶⁷JAS, II, 55.

¹⁶⁸GS 1824, p. 169.

¹⁶⁹Poschinger, I, 241-43.

¹⁷⁰GS 1824, p. 169, art. i, pars. 14-21.

¹⁷¹Poschinger, I, 246.

¹⁷²GS 1833, p. 5; GS 1849, p. 359.

¹⁷³Poschinger, I, 246.

¹⁷⁴GS 1824, p. 169.

¹⁷⁵Poschinger, I, 246.

¹⁷⁶Tilly, Financial Institutions, chap. ii.

¹⁷⁷GS 1820, p. 9.

¹⁷⁸Allgemeine Augsburger Zeitung, No. 333 (Nov. 28, 1832).

¹⁷⁹GS 1833, p. 5.

¹⁸⁰GS 1849, p. 359.

¹⁸¹Poschinger, I, 252-54.

¹⁸²Immediatbericht of the Ministry of Finance of Apr. 23, 1823, cited by Poschinger, I, 234. Also AKO of March 20, 1830, and AKO of Dec. 5, 1836, GS 1836, p. 318.

¹⁸³See also supra, n. 88.

¹⁸⁴Meitzen, III, 157-62.

¹⁸⁵GS 1850, pp. 77, 112, 341.

¹⁸⁶Cahill, p. 95.

¹⁸⁷Meitzen, III, 121-22.

¹⁸⁸Declaration of December 12, 1838, GS 1838, p. 5, and the Addendum, AKO of July 26, 1841, GS 1841, p. 287.

¹⁸⁹Verhandlungen über den Ersten Vereinigten Landtag in Berlin 1847, p. 136.

¹⁹⁰Supra, p. 14. See also Alex Bergengrün, David Hansemann (Berlin, 1901), p. 56, and EVS, [III], 2164-72.

¹⁹¹Bergengrün, ibid.

¹⁹²Supra, p. 14.

¹⁹³Cahill, p. 75.

¹⁹⁴Ernst Engels, "Die Hypotheken-Obligationen ausgehenden Grundcredit-Institute, insbesondere im preussischen Staate," ZSB, XV (1875), 335.

¹⁹⁵Ibid.

¹⁹⁶Cahill, p. 75.

¹⁹⁷Ibid.

¹⁹⁸Ibid., p. 76.

¹⁹⁹Ibid., pp. 82-83.

²⁰⁰GS 1856, pp. 637, 638ff., 881.

²⁰¹Cahill, pp. 82-83.

²⁰²L. [Witten] Berger, Der alte Harkort: Ein westfälisches Lebens- und Zeitbild (Leipzig, 1890), p. 324.

²⁰³Gülich, IV, 432, 477, 560, 567-68; Walther G. Hoffmann, "The Take-Off in Germany," The Economics of Take-Off into Sustained Growth, ed. by W. W. Rostow (London, 1963), p. 114; Arthus Spiethoff, Die wirtschaftlichen Wechsellagen: Aufschwung, Krise, Stockung (2 vols.; Tübingen, 1955), I, 113-17.

²⁰⁴Tilly, Financial Institutions, pp. 10-11, 81.

²⁰⁵Böhme, FfmHbg., pp. 31-32; Mauersberg, WirtGesch., pp. 179-217, passim, pp. 565-87, passim.

²⁰⁶Richard Tilly, "Germany, 1815-1870," Banking in the Early Stages of Industrialization: A Study in Comparative Economic History, ed. by Rondo Cameron (New York, 1967), pp. 159-60, and his Financial Institutions, pp. 48-62.

²⁰⁷Jacob Riesser, The German Great Banks and their Concentration in Connection with the Economic Development of Germany (Washington, 1911), pp. 63-66.

²⁰⁸Rudolf Banck, Geschichte der sächsischen Banken mit Berücksichtigung der Wirtschaftsverhältnisse (Dresden, 1896), pp. 5-6; Riesser, pp. 5-6, 39, 49-50.

²⁰⁹GeschHKFfm., p. 663.

²¹⁰Hugo Kanter, Die Entwicklung des Handels mit gebrauchsfertigen Waren von der Mitte des 18. Jahrhunderts bis 1866 zu Frankfurt a.M. (Tübingen, 1902), pp. 112-13.

²¹¹JAS, I, 464; Treitschke, V, 502.

²¹²Rudolf Kaulla, Die Organisation des Bankwesens im Königreich Württemberg in ihrer geschichtlichen Entwicklung (Stuttgart, 1908), p. 6.

²¹³GeschHKFfm., p. 659.

²¹⁴Mathieu Schwann, Ludolf Camphausen als Wirtschaftspolitiker (3 vols.; Essen, 1915), I, 255-56.

²¹⁵Albert Lotz, Geschichte des Deutschen Beamtentums (Berlin, 1906), pp. 422-23; Waldemar Müller, "The Organization of Credit and Banking Arrangements in Germany," Miscellaneous Articles on German Banking (Washington, 1910), pp. 117-69; Tilly, Financial Institutions, p. 64.

²¹⁶Tilly, Financial Institutions, p. 46.

²¹⁷Wilhelm Anton von Klewiz (1760-1838), from Magdeburg, Prussian Minister of Finance 1817-24, president of Saxony 1825. He is considered to be the pioneer of Prussian tax reforms. ADB, XVI, 180-81.

²¹⁸Brockhage, p. 106.

²¹⁹Ludwig Friedrich Victor Hans Graf von Bülow (1774-1825), from Mecklenburg, Prussian statesman. Took charge of the affairs of the department concerned with the war and domain treasury. In 1808, he became the Minister of Finance in Westphalia and was able to create a surplus budget in spite of contributions to Napoleon. Was asked to appear at the meeting of the allies in Frankfurt, and consequently was

appointed Prussian Minister of Finance, to be replaced by Klewiz in 1817. It was then that he became Minister of Commerce and Industry, director of the Dept. of Public Works, and retained the presidency of the finance section of the State Council (Staatsrat) from which position he continued to exert considerable influence on financial affairs in the Prussian administration. The Ministry of Commerce and Industry was dissolved to become part of the Ministry of the Interior in 1825, one of the main reasons being that Bülow's presence in the government was a hindrance. The King, reluctant to dismiss him, had to give in to pressure. ADB, III, 533-38.

²²⁰Brockhage, pp. 105-6.

²²¹Richard Ehrenberg, Grosse Vermögen, ihre Entstehung und ihre Bedeutung, Vol. I: Die Fugger, Rothschild, Krupp (3d ed., Jena, 1925), pp. 80-82; Henderson, State, p. 124.

²²²Ehrenberg, pp. 81-83, 87-88.

²²³Ibid., pp. 85-86.

²²⁴Christian von Rother (1778-1849), ADB, XXIX, 360-61.

²²⁵Henderson, State, p. 146; Mieck, pp. 201-6.

²²⁶C. J. Bergius, Preussische Zustände (Münster, 1844), p. 273, quoting a letter by the merchant von Lobbecke in response to Bergius' article "Die Landwirthe und die Fabrikanten," which appeared in the Breslauer Zeitung [date unknown], which reads in part, "it is sad to experience the contempt and mistrust directed toward us by the civil servants, an attitude we entrepreneurs do not deserve." See also Rudolf von Delbrück, Lebenserinnerungen 1817-1867 (2 vols.; Leipzig, 1905), I, 184; Hans Dieter Krampe, Der Staatseinfluss auf den Ruhrkohlenbergbau in der Zeit von 1800 bis 1865 (Cologne, 1961), p. 89, quoting the official opinion of the Supreme Mining Office (Oberbergamt) at Dortmund that entrepreneurs were not capable of managing their affairs properly without state guidance. See also Conze, "Das Spannungsfeld...", pp. 246-69; Hansen, I, 159-60, 168, 229-34, 307-9, 325-27, 426-27, and II, 519-22; Henderson, State, pp. 154-55; Eckart Kehr, "Zur Genesis der preussischen Bürokratie und des Rechtsstaats," Der Primat der Innenpolitik (Berlin, 1965), pp. 31-52. In response to the apparent political ambitions of the entrepreneurial bourgeoisie, Count Itzenplitz, provincial president at Arnsberg, demanded in a report that only those "who went the arduous and wearisome way of the civil service have a right to play a role in the affairs of the state." Report No. 485 of the Government Office at Arnsberg (March 30, 1847), quoted by Friedrich Zunkel, "Beamtenschaft und Unternehmertum beim Aufbau der Ruhrindustrie 1849-1880," Tradition, IX (1964), 267. Furthermore, attention needs to be drawn to AKO of July 13, 1839, GS 1839, p. 235, prohibiting government employees to earn money other than what constitutes their wages. Since these were notoriously underpaid, such regulations did not further the understanding between these two groups.

²²⁷Brockhage, p. 131; Ehrenberg, pp. 93-95.

²²⁸Henderson, State, p. 146; Mieck, p. 206.

²²⁹Ehrenberg, pp. 86-87.

²³⁰Instructions by Hardenberg to Rother, quoted by Brockhage, n. 1, p. 107.

²³¹Several years later, Rother severely criticized the behavior of the Berlin bankers when he stated that the negotiations with them which had been anything but pleasant, faltered because they were determined to take advantage of the state's predicament. Their offers were too low to be of any value, the conditions too disadvantageous for the state; they apparently even went so far as to have humiliated the state into demanding the administration of the mortgaged royal domains. Such opinion is not in accord with the events described, but became typical of Rother as he displayed antipathy toward bankers and entrepreneurs in general. See Brockhage, p. 108.

²³²Ibid., pp. 107-8.

²³³Ibid., p. 109; Leopold Krug, Geschichte der preussischen Staatsschulden, ed. by C. J. Bergius (Breslau, 1861), p. 195.

²³⁴Brockhage, pp. 107-8.

²³⁵The intricacy of this phase of the negotiations is excellently described by Brockhage, pp. 106-10, and Ehrenberg, pp. 89-91.

²³⁶The Times (London), April 6, 1818.

²³⁷The above paper reported that the loan was repayable over a period of 36 years.

²³⁸Henderson, State, p. 125, quoting L. H. Jenks, The Migration of British Capital to 1875 (London, 1927), p. 38.

²³⁹Ehrenberg, p. 96; Henderson, State, p. 125; The Times (London), ibid.

²⁴⁰According to Hertel's Kurszettel of this date; Brockhage, p. 110.

²⁴¹Ehrenberg, p. 96; Frederick Martin, Stories of Banks and Bankers (London, 1865), p. 77; The Times (London), ibid.

²⁴²GS 1820, p. 9 ; see also C. J. Bergius, Preussische Zustände, a more thorough analysis of the State Debt Edict by a contemporary writer.

²⁴³AKO of Jan. 17, 1820, GS 1820, p. 25. Cf. also Poschinger, I, 234-36.

²⁴⁴Ibid. The Law of Feb. 24, 1850, GS 1850, p. 57, ended this ambiguity and deprived the director of the State Debt Redemption Office of contracting any additional debts on his own, either directly or indirectly. See also Bergius, Grundsätze, pp. 447-48.

²⁴⁵Brockhage, pp. 102-5, 131-32.

²⁴⁶Friedrich Christian Adolf von Motz (1775-1830), from Magdeburg. Already his ancestors distinguished themselves as civil servants. Motz is considered to have been the architect of the German Zollverein. ADB, XXII, 408-10. See also Henderson, State.

²⁴⁷Fritz Terhalle, "Geschichte der deutschen öffentlichen Finanzwirtschaft vom Beginn des 19. Jahrhunderts bis zum Schlusse des zweiten Weltkrieges," Handbuch der Finanzwissenschaft, ed. by Wilhelm Gerloff and Fritz Neumark (3 vols.; 2d rev. ed.; Tübingen, 1952-58), I, 276.

²⁴⁸Henderson, State, pp. 81-85.

²⁴⁹Ibid., pp. 86-89.

²⁵⁰Ibid., p. 89. According to Brockhage, n. 2, p. 120, the treasury of the State Debt Redemption Office received from these sources between 1820 and 1833 23.8 million thlr.

²⁵¹Brockhage, pp. 124-28; supra, n. 148.

²⁵²Supra, p. 38.

²⁵³Adolf Wagner, System der Deutschen Zettelbankgesetzgebung, unter Vergleichung mit der ausländischen: Zugleich ein Handbuch des Zettelbankwesens (Freiburg i.Br., 1870; this work is Vol. I of a two-volume set, of which Vol. II has a slightly different title. This set is hereafter referred to as Zettelbankwesen), pp. 28-29.

²⁵⁴See supra, n. 231; also Delbrück, I, 184; Wolfram Fischer, "Das Verhältnis von Staat und Wirtschaft in Deutschland am Beginn der Industrialisierung," Kyklos, XIV (1961), 350.

²⁵⁵Henderson, State, p. 126.

²⁵⁶This debt was not entered as a debt of the state, that is, not as part of the total debt budget, but as a liability of the State Treasury. Rother thought that, because of the intended use of this money, a permission of the estates (Reichsstände) in accordance to the edict of Jan. 17, 1820, was unnecessary; it certainly was politically more expedient. See also Brockhage, pp. 103, 129.

²⁵⁷Johann Georg Büsch (1728-1800), theologian, mathematician, economist, founder of the popular Hamburg Handelsakademie, outlined guidelines for economic management: 1) retain specie in the country, 2) obtain as much foreign capital as possible, and 3) circulate the money in the country for the benefit of the public. Rother's teachers were Büsch's pupils. See also Brockhage, pp. 108, 131, and Liebel, "Laissez-faire vs. Mercantilism...", pp. 224ff.

²⁵⁸Brockhage, p. 136.

²⁵⁹Friedman, p. 8. See also Eugen Grossmann, "Finanzen und Währung," Handbuch der Finanzwissenschaft, I, 189-90.

²⁶⁰Henderson, State, p. 131.

²⁶¹Instruction by the Seehandlung to the Breslau banking firm Eichborn & Co., cited by Brockhage, n. 3, p. 110.

²⁶²Gustav Schmoller, Umriss und Untersuchungen zur Verfassungs-, Verwaltungs- und Wirtschaftsgeschichte, besonders des preussischen Staates im 17. und 18. Jahrhundert (Leipzig, 1898; hereafter referred to as Umriss), p. 222.

²⁶³Brockhage, pp. 120-21; Krug, Geschichte der preussischen Staatsschulden, p. 352.

²⁶⁴Terhalle, p. 276. Cf. also E. von Bülow-Cummerow, Preussen, seine Verfassung, seine Verwaltung, sein Verhältnis zu Deutschland (2 vols.; Berlin, 1842; Jena, 1843; hereafter referred to as Preussen), I, 143ff., and by the same author, Abhandlungen, II, passim, the latter a thorough and critical analysis of Prussian financial administration.

²⁶⁵Brockhage, pp. 120-21.

²⁶⁶Ibid., p. 123.

²⁶⁷Ibid., pp. 173-74.

²⁶⁸Ibid., p. 171.

²⁶⁹Ibid.

²⁷⁰Ibid., p. 172, n. 1.

²⁷¹Harkort observed years later, in 1845, that commerce hardly noticed the existence of the bank; Bergengrün, pp. 84-85.

²⁷²Brockhage, p. 128.

²⁷³GS 1832, p. 220. See also Brockhage, p. 174.

²⁷⁴Brockhage, pp. 137, 177.

²⁷⁵Ibid., p. 174.

²⁷⁶Schmoller, Umriss, p. 4.

²⁷⁷Brockhage, p. 175.

²⁷⁸AKO of Aug. 8, 1835; Brockhage, p. 177.

²⁷⁹Trade was prohibited by the decree of Jan. 19, 1836, GS 1836, p. 9, and of May 13, 1840, GS 1840, p. 123.

²⁸⁰Supra, n. 148.

²⁸¹Brockhage, p. 179.

²⁸²Bülów-Cummerow, Bankwesen, p. 3.

²⁸³GS 1840, p. 123.

²⁸⁴Werner Sombart, Die deutsche Volkswirtschaft im neunzehnten Jahrhundert (3d rev. ed.; Berlin, 1913), pp. 281-2.

²⁸⁵Bülów-Cummerow, Preussen, II, 117, expressed such a view.

²⁸⁶Brockhage, p. 205.

²⁸⁷Supra, chap. ii.

²⁸⁸Brockhage, p. 207.

²⁸⁹Ibid., quoting Rother's report of May 14, 1845, to the King.

²⁹⁰Ibid.; also Georg Fleck, "Studien zur Geschichte des preussischen Eisenbahnwesens. V: Die Anfänge des preussischen Eisenbahnwesens östlich der Oder," Archiv für Eisenbahnwesen, XXI (1898), p. 662, where Rother, in connection with a major project, presents his favored view that roads will serve well enough any domestic trade requirements.

²⁹¹Brockhage, p. 211-12

²⁹²Goltz, II, 176-77; Lütge, DSWGesch., p. 456; Treitschke, III, 457-60.

²⁹³Rother could have used the same arguments as he did in 1832; supra, pp. 88-89.

²⁹⁴Hansen, I, 313.

²⁹⁵Ibid., I, 314.

²⁹⁶Ibid., I, 321.

²⁹⁷Ibid., I, 325-27.

²⁹⁸GS 1844, p. 35.

²⁹⁹Hansen, I, 312.

³⁰⁰Publikandum des Kgl. Finanzministerii (von Bodelschwingh) of Feb. 14, 1844.

³⁰¹GS 1844, p. 117.

³⁰²Hansen, I, 322.

³⁰³Fleck, "Studien zur Geschichte...", p. 662; Brockhage, p. 207.

³⁰⁴The ministers Flottwell and Bodelschwingh to the King on May 22, 1846, cited by Brockhage, p. 213; report of the Cologne Chamber of Commerce (Ludolf Camphausen) of July 26, 1845, cited by Hansen, I, 321, n. 1.

³⁰⁵Hansen, I, 312.

³⁰⁶AKO of Nov. 22, 1842, GS 1842, p. 307; Bülow-Cummerow, Preussen, II, 135-36, believed that the government had not yet fully realized the importance of keeping control over the railroad networks; Hansen, I, 313.

³⁰⁷Hanns Leiskow, Spekulation und öffentliche Meinung in der ersten Hälfte des 19. Jahrhunderts (Jena, 1930), p. 31.

³⁰⁸Tilly, Financial Institutions, p. 34. See also supra, p. 59.

³⁰⁹The volume of business as listed in Appendix C indicates any business, incl. that of lombard which at times was only extended for a few days. These figures do not tell us the total credit outstanding at the end of the fiscal year. The actual extent of help provided by the institute was in no relation to these figures. See also supra, n. 271.

³¹⁰Tilly, Financial Institutions, p. 35.

³¹¹Schwann, I, 251-59.

³¹²Tilly, Financial Institutions, pp. 34-35.

³¹³AHGS, p. 195.

³¹⁴Ibid., pp. 198-99.

³¹⁵Bülow-Cummerow, Bankwesen, pp. 5-6.

³¹⁶Bülow-Cummerow, Preussen, I, 229.

³¹⁷August Friedrich (formerly Abraham) Bloch (1780-1866), merchant in Königsberg. NDB, II, 305.

³¹⁸Poschinger, II, 53ff.; Hansen, I, 326.

³¹⁹Supra, n. 142, for a biographical note on Rönne.

³²⁰Carl Julius Bergius (1804-1871), noted publicist in economics. His ancestors lived in Pomerania since the 16th century. Began his career as a civil servant in Potsdam in 1828. He was transferred as Regierungsrat to Breslau, where he eventually also became professor of political science at the University. ADB, II, 388-89.

³²¹Das Geld- und Bankwesen in Preussen (Breslau, 1846; hereafter referred to as GeldBankwesen.).

³²²Marcus Niebuhr, Bankrevolution und Bankreform: Wort eines Laien für Laien (Berlin, 1846).

³²³Gottfried Ludolf Camphausen (1803-1890), merchant, and a leading Rhineland liberal. Member of the Cologne City Council 1831-37 and 1839-47. Secretary of the Cologne of Chamber of Commerce 1833-37, and its president 1839-47. This institute became the most respected of all all chambers of Germany under his leadership. NDB, III, 112-15. David Justus Ludwig Hanseemann (1790-1864), originally from Hamburg. Established himself as a successful wool and cotton cloth merchant in Cologne. His activities incl. insurance, railroads, and banking. He became Prussian Minister of Finance in the Camphausen ministry of March 1848. NDB, VII, 626-29.

³²⁴Henderson, State, pp. 154-55. Cf. also Hansen, I, 168, 229-34, 307-39, 426-27, and Zunkel, 264.

³²⁵Tilly, Financial Institutions, pp. 96-97.

³²⁶Hansen, I, 325-27, and the report by Gustav von Mevissen to the general meeting of the A. Schaaffhausen Bankverein, Cologne, of Sept. 3, 1853, reprinted in Hansen, II, 519-22.

³²⁷Tilly, Financial Institutions, pp. 96-97.

³²⁸Grossmann, p. 179.

³²⁹Liebel, "Laissez-faire vs. Mercantilism...", p. 208.

³³⁰Grossmann, p. 181.

³³¹Die neuen Bankverordnungen in Preussen: Unmassgebliches Votum eines Finanzmannes (Hamburg, 1846), pp. 25-26. For the legislation in reference to the restrictions, see AKO of July 13, 1839, GS 1839, p. 235; on the effects of this, see Lotz, pp. 422ff., and Zunkel, 270-71.

³³²AKO of October 5, 1846, GS 1846, p. 435; Poschinger, I, 227-33. See also Bergius, Grundsätze, pp. 240-42.

³³³Poschinger, II, 20, n. 2.

³³⁴Treitschke, V, 502.

³³⁵GS 1846, p. 435.

³³⁶Von der Königlichen Bank zur Deutschen Reichsbank: 175 Jahre deutscher Notenbankgeschichte 20. Juli 1765-20. Juli 1940 (Berlin, 1940), p. 21.

³³⁷Sombart, p. 175.

³³⁸Helen P. Liebel, "Inflation: Its History and Policy, 1500-1968," Dalhousie Review, XLIX (1968), 13.

³³⁹Bülów-Cummerow disagrees as to the beneficial effect of these schemes because of the resultant increase of capital export due to a lack of attractive domestic investment opportunities; Banken, p. 3.

³⁴⁰Brockhage, p. 131.

³⁴¹Wagner, Zettelbankwesen, I, 12; II, xiv.

³⁴²HS, pp. 508-11; JAS, II, 167. See also the memorandum of May 20, 1814, by Wilhelm von Humboldt to Hardenberg, cited by Treitschke, I, 333, in this connection. It was often argued by 19th century economists that most of the monies thus collected stayed in the country as they were used to pay for the army supplies, and therefore these payments did not constitute a loss (Sombart, p. 78). Indeed, the supplying of the forces resulted in many local booms (John Russel, A Tour in Germany and some of the Southern Provinces of the Austrian Empire, in 1820, 1821, 1822 [2 vols.; 2d. ed.; Edinburgh, 1825], I, 323-24). However, most of this capital ended up with people who by their very nature or occupation had never intended to invest anywhere else but in high-risk short-term speculation, depriving the economy of much needed long-term investment capital.

³⁴³Supra, chapter i.

³⁴⁴Of 1,325,000 thlr. notes issued by 1793, only half were in circulation by 1805/6; further, AKO of Dec. 1836, ordered the withdrawal of 4.5 million thlr. worth of notes to be replaced by 3 million thlr. worth of bank deposit notes which were guaranteed by the same amount of Treasury Notes (which, at this time, were trading under par); Bergius, Grundsätze, pp. 239-40.

³⁴⁵Hansen, I, 382-83; Poschinger, II, 18-19. See also Bülów-Cummerow's critiques, Bankwesen, and Ueber die neue Organisation der Königlichen Bank und die Betheiligung der Privatpersonen bei derselben (Berlin, 1846), and the anonymously published pamphlet, Die neuesten Bankverordnungen....

³⁴⁶Heinrich Theodor von Schön (1773-1856), from East Prussia, studied under Kant in Königsberg, entered the Prussian civil service and became a close associate of Frhr. von Stein during the years of reform legislation. Pres. of Westphalia (1816), and of Prussia (1824) when the two Prussian provinces came under one administration. He retired in 1842, but remained active in political influence. He was the foremost leader of the Prussian liberals.

³⁴⁷Bülów-Cummerow, Ueber die gegenwärtige allgemeine Creditlosigkeit und über die Mittel sie gründlich zu beseitigen (Berlin, 1848).

³⁴⁸Johann Karl Rödbertus (1805-1875), from Mecklenburg, studied law, but having been inspired by the French Revolution of July 1830, also studied economics. He was an outspoken defender of equal rights, and refused to see in the rising laboring class a danger to law and order. ADB, XXVIII, 740-63.

³⁴⁹Die preussische Geldkrisis (Anclam, 1845). While he believed that railroad projects drained capital, he recognized that Prussian and German industry would have had inadequate capital reserves even if there would have been less competition for it. He opposed the use of state paper money as its use would only induce senseless spending and would only satisfy state requirements. Furthermore, such money could easily devalue in times of political crises. Therefore, the solution was bank money based on private obligations, made available as credit only to productive enterprises. This thinking is in line with his theory that a country's circulating capital should not be backed by gold or silver but rather on the product of its labor.

³⁵⁰Poschinger, I, 233.

³⁵¹Verhandlungen über den Ersten Vereinigten Landtag in Berlin 1847, I, 727ff.

³⁵²See the pamphlet by Ziehl.

³⁵³Poschinger, II, 107-8.

³⁵⁴"Entwurf eines Gesetzes betreffend die Einrichtung von Privatbanken durch Gesellschaften mit vereinigten Fonds" (unpublished MS, Nov. 1847), discussed by Poschinger, II, 110-11.

³⁵⁵Hansen, I, 428-9.

³⁵⁶Ibid., I, 342, 382-3, 645-47. See also JAS, II, 58; Hübner, II, 46; Poschinger, II, 112-14.

³⁵⁷Henderson, State, p. 146; cf. also ibid., pp. xix-xx; Hansen, I, 159; Mieck, pp. 4-6.

³⁵⁸Bergius, GewerbeGesetze, p. 9.

³⁵⁹Zunkel, 266.

³⁶⁰Letter by the member of the Landtag, F. W. Diergardt to Mevissen, March 22, 1848, reprinted in Hansen, II, 348.

³⁶¹Hansen, I, 535.

³⁶²Ibid., II, 359; see also ibid., I, 346, 353.

³⁶³Ibid., I, 536-38.

³⁶⁴Ibid., I, 538, 603; Ehrenberg, p. 181.

³⁶⁵Trost, 265; SZND, III, 561.

³⁶⁶Finckenstein, pp. 16-20, 98-99; Waltershausen, p. 100.

³⁶⁷Prussia was in many ways more progressive than the other governments of Germany. In addition to the evidence supplied throughout this thesis, one should also consult the publications of C. F. Nebenius, Der deutsche Zollverein, sein System und seine Zukunft (Carlsruhe, 1835), pp. 325-26, and his "Ueber die Entstehung und Erweiterung des grossen deutschen Zollvereins," DVS, XXVIII (1838), 319-359; Moritz Mohl, Ueber Bank-Manöver, Bankfrage und Krisis (Stuttgart, 1858); Robert Mohl, Erörterungen über die württembergische Staatsschuld (Tübingen, 1847). All of these give some clue as to the problems the other German states faced. However, charges that Prussia exerted political hegemony over Germany is vehemently refuted by Nebenius, "Ueber die Entstehung...", 338-39, and by a later historian, Friedrich Meinecke, "Zur Geschichte des Gedankens der preussischen Hegemony," Historische Zeitschrift, LXXXII (1899), 98-104.

³⁶⁸Hansen, II, 339.

³⁶⁹Ibid., II, 362; cf. also Delbrück, I, 212.

³⁷⁰Hansen, I, 538.

³⁷¹Ibid., II, 361; Hugo Rachel and Paul Wallich, Berliner Grosskaufleute und Kapitalisten, Vol. III: Übergang zum Hochkapitalismus 1804-1856 (Berlin, 1939), p. 261.

³⁷²Hansen, II, 361.

³⁷³See also Friedman, pp. 95-99.

³⁷⁴S. Ghosh, Inflation in an Under-developed Economy: A Study of Inflation in India (Calcutta, 1959), p. 33. Not so in Friedman's opinion. He also opposes John Maynard Keynes' view that monetary policy has only a limited impact on economic trends within a developed country, feels that a government's monetary policy continues to be the most significant factor in controlling economic growth, regardless of the stage of industrialization the country might be in; see his work, A Monetary History of the United States 1867-1960 (Princeton, 1963).

APPENDICES

APPENDIX A

THE POPULATION OF GERMANY AND PRUSSIA 1818-62

1. The German population.

	a	b	c
1818	25.4		
1822	26.9	1.6	1.4
1826	28.3	1.4	1.3
1830	29.4	0.9	1.0
1834	30.5	0.7	0.9
1838	31.8	1.0	1.1
1842	33.3	0.8	1.2
1846	34.6	1.0	1.0
1850	35.3	0.8	0.5
1854	36.1	0.8	0.6
1858	36.8	0.8	0.5
1862	38.4	1.1	1.2

a: Population in million of inhabitants.

b: Annual percentage growth rate of German net births, i.e., live births minus deaths.

c: Annual percentage growth rate of German population.

Source:

Hoffmann, Wachstum, pp. 172-73.

2. The Prussian population.

	a	b
1816	10.4	
1819	11.0	1.9
1822	11.7	1.9
1825	12.3	1.6
1828	12.8	1.2
1831	13.1	0.7
1834	13.6	1.2
1837	14.2	1.4
1840	15.0	1.9
1843	15.5	1.2
1846	16.2	1.3
1849	16.3	0.3
1852	16.9	1.2
1855	17.2	0.5
1858	17.7	1.0

a: Population in million of inhabitants.

b: Averaged annual percentage growth rate over last census.

Note: Data excl. Schleswig, Hanover, Hildesheim, Lüneburg, Stade, Kassel, Osnabrück, and Wiesbaden for all years, Sigmaringen until 1858.

Incl. all troops stationed outside the Prussian state with the exception of Hanover, Hessen-Nassau, and Schleswig-Holstein for all years, and Sigmaringen until 1858.

Sources: HS, p. 154; JAS, I, 109, 112-13; JAS, III, 593; A. Meitzen, Der Boden und die landwirtschaftlichen Verhältnisse des preussischen Staates nach dem Gebietsumfange vor 1866 (6 vols. and suppl.; Berlin, 1868-1901), VI, 566-67.

APPENDIX B

GERMAN AND PRUSSIAN
INDUSTRIAL EMPLOYMENT AND PRODUCTIVITY

1. Census of employees in Prussian consumer goods industries.

	1846	1849	1852	1855	1858	1861
I	1,438	1,238	1,392	1,459	1,508	2,193
II	23,307	25,679	30,088	32,870	35,720	31,283
III	15,642	15,805	18,319	19,761	21,222	23,593
IV	16,432	22,337	25,879	26,928	28,844	35,593
V	189,422	212,116	236,845	239,815	261,932	276,873
VI	573,560	678,915	707,559	696,196	685,271	670,354
VII	123,971	123,141	132,144	134,073	144,171	153,594
VIII	16,747	17,255	20,826	22,407	25,160	22,886
IX	1,782	1,899	2,185	2,375	2,893	2,930
SUM:	962,301	1,098,395	1,175,237	1,175,884	1,206,723	1,219,299

Classification of industries:

- I: Manufacture of instruments.
- II: Manufacture of metal wares such as sewing and knitting needles, lamps, lacquer wares.
- III: Mineralurgic industries producing earthenwares; bone china, glass, porcelain goods.
- IV: Chemical and pharmaceutical industries manufacturing medical supplies for home use, perfumes, soaps.
- V: Food processing industries.
- VI: Textile and clothing industries, also processing and manufacturing plants for felt, fur, leather, and rubber goods.
- VII: Manufactures of furniture and minor wood products.
- VIII: Manufactures of paper goods (excl. newsprint).
- IX: Building trades: decorators and upholsterers.

Source: JAS, I, 438-61.

2. Averaged annual percentage growth rates of employment in German consumer goods and service industries.

	a	b	a: Averaged percentage growth rate of employment in consumer goods industries.
1846-49	4.6	3.7	
1849-52	2.3	3.3	
1852-55	0.1	3.0	b: Averaged annual percentage growth rate of employment in traffic industries, excl. techn. personnel.
1855-58	0.9	5.9	
1858-61	0.8	3.8	

Sources: Hoffmann, Wachstum, p. 200; JAS, I, 438-61.

3. Employment and mechanization in Prussian flour, groats, and pot-barley mills,

	a	b	c
1819-1831	0.55		
1831-1846	2.97	0 to 927	0 to 71
1846-1849	3.47	1,111	98
1849-1852	1.13	2,007	172
1852-1855	1.17	3,566	337
1855-1858	1.40	6,195	521
1858-1861	0.73	8,101	600

a: Averaged annual percentage growth rate of number employed.

b: Mechanization in horse power.

c: Mechanization in number of steam engines operating.

Sources: JAS, I, 445-46, 461-62; Waltershausen, pp. 53-54.

4. Productivity index in values of 1913 prices (percentage increase).

1850/54-1855/59: 9.7

1855/59-1860/64: 12.9.....equals an increase of 2.26% per annum

1860/64-1865/69: 10.9.....equals an increase of 2.38% per annum

Source: Hoffmann, Wachstum, p. 33.

5. Labor productivity index in values of 1913 prices (in mark).

1850/52-1855/58: 33

1855/58-1861/67: 98.....equals an increase of 6.63% per annum

Source: Hoffmann, Wachstum, p. 24.

APPENDIX C

BUSINESS OF THE ROYAL BANK OF PRUSSIA 1768-1845^a
(in million of thaler)

Year	Total volume of transactions ^b	New deposits ^b	Accumulated liquid reserves	Profits ^b
1768	..	..	..	0.02
1769	..	0.7	..	0.05
1770	..	1.6	..	0.05
1771	..	..	..	0.07
1772	..	..	..	0.09
1773	33.6	..	..	0.12
1774	32.0	..	..	0.12
1775	37.4	5.9	..	0.11
1780	49.1	9.9	..	0.14
1785	72.7	12.9	..	0.21
1790	84.4	21.0	..	0.34
1795	64.4	24.3	..	0.28
1800	82.1	27.0	..	0.42
1804	156.6	32.9	..	0.52
1805	135.5	31.8	..	0.58
1806	..	28.6	9.7	..
1807	..	24.9	..	..
1810	..	21.7	0.3	..
1815	..	21.9	..	..
1818	43.9	..	..	..
1819	52.0	..	..	..
1820	76.6	25.0	0.7	..
1825	72.3	22.5	1.5	..
1830	234.8	21.6	4.1	..
1835	263.1	24.0	4.7	..
1837	178.9	25.5	11.0	..
1838	248.7	25.5	12.5	..
1839	305.7	26.4	13.4	..
1840	367.9	29.2	8.8	..
1841	334.8	30.0	16.6	..
1845	373.6	25.9	11.6	..

^aIncludes the business of all branches and sub-branches.

^bAmounts for the current year at end of the fiscal year of the bank.

Sources: Niebuhr, GeschKglBank., pp. 60, 214-16, 227-31; Poschinger, I, 332-33.

APPENDIX D

GERMAN AGRICULTURAL CREDIT INSTITUTIONS 1777-1857

1. Land Mortgage Credit Associations (Landschaften).

Name of Assn. and Regist'd. Offices	Date of Foundation ^a	Area of Operation
Schlesische Landschaft ^b (Silesian Credit Assn.) Breslau	1770 [1849]	Province of Silesia
Ritterschaftliches Credit- Institut der Kur- und Neumär- kischen Landschaft (Kur and Neumark Manorial Mortgage Credit Assn.) Berlin	1777	Brandenburg, parts of Pomerania and Saxony
Pommersches landwirtschaftliches Credit-Institut (Pomeranian Mortgage Credit Assn.) Stettin	1781	Pomerania, parts of Posen and West Prussia
Westpreussische landwirtschaft- liche Creditanstalt (West Prussian Mortgage Credit Assn.) Bromberg	1787 [1851]	West Prussia
Ostpreussische Landschaft (East Prussian Mortgage Credit Assn.) Königsberg	1788 [1808]	East Prussia
Credit-Verein der Lüneburger Ritterschaft ^c (Manorial Credit Institute of the Luneburg Knights) Celle	1790	District of Luneburg
Kreditverein der adligen Güter und Klöster in Schleswig-Holstein (Credit Assn. for landed and ecclesiastical properties) ^d	1811 (1833)	Schleswig-Holstein
Ritterschaftlicher Credit-Verein für die Grossherzogtümer Mecklenburg (Mecklenburg Manorial Credit Assn.) Rostock	1818	Duchy of Mecklenburg- Schwerin

APPENDIX D-Continued

Name of Assn. and Regist'd. Offices	Date of Foundation	Area of Operation
Posenscher Adliger Credit-Verein (Posen Mortgage Credit Assn.) ^e Posen	1821 1857 [1857]	Province of Posen
Kreditverein der Ritterschaft von Kallenberg, Grubenhagen, Göttingen und Hildesheim	1825 [1836]	Districts of Hanover and Hildesheim
Ritterschaftlicher Kreditverein von Bremen und Verden (Bremen-Verden Manorial Credit Assn.) Stade	1826 [1826]	District of Stade
Württembergischer Creditverein Stuttgart	1827 [1827]	Württemberg
Kreditinstitut der Grundeigen- tümer des Fürstentums Ost- Friesland und des Harlingerlands (Credit Institute of the landed proprietors of the principalities of...)	1828 [1828]	East Friesland and Harlingerland
Königliches Kreditinstitut für Schlesien ^f (Royal Credit Institute of Silesia) Berlin	1835 (1850)	Silesia and Upper Lusatia
Erbländischer ritterschaftlicher Kreditverein im Königreich Sachsen ^g (Manorial Credit Assn. of Hereditary Properties in the Kgd. of Saxony) Leipzig	1844 [1844]	Kgd. of Saxony

^aThe first date represents the year of the founding charter. The date within brackets indicates when the charter was revised to include small rural property holders. Falls the date of closure of the credit institute within this period, the year is enclosed within parentheses.

^bThe Land Mortgage Credit Association of Gorlitz (Görlitzer Fürstentumslandschaft) which originally operated under a charter of the Kingdom of Saxony was absorbed by the Silesian Credit Assn. in 1827; GS 1827, p. 39.

APPENDIX D-Continued

^cThis institute, also known as Celler Ritterschaftliches Kreditinstitut, was perhaps the most successful of all agricultural mortgage credit institutions in terms of profits, service and length of operation. After 175 years of existence, its board of governors decided to terminate its active business and to limit the operation only to the management of its sizable funds. As a recent edition of the Frankfurter Börsenzeitung was to have written, "A bank was pensioned off." (F. Seidenzahl, "175 Jahre Ritterschaftliches Kreditinstitut Lüneburg," p. 334.) Part of the bank's success lied in its founding charter which, according to the just quoted writer, is a document of foresight and wisdom. The bank issued Certificates of Term Deposits which represented gilt-edged securities on the stock exchanges of Europe; recently, such certificates were introduced by North American banks.

^dFounded by the Royal Danish Order of Nov. 11, 1811; in 1814, the institute discontinued to issue bonds; in 1833, it liquidated its assets.

^eOriginally established in 1821 for 5 years only but with the privilege of renewal of the charter for five-year periods (GS 1815, p. 101; GS 1821, p. 217), it continued to exist until the new charter of 1857. At that time, the institute was renamed Neuer landschaftlicher Kreditverein für die Provinz Posen (GS 1857, p. 326), and as such, extended its services to smallholders.

^fEstablished June 8, 1835 (GS 1835, p. 101), primarily to make credit available on a larger portion of property security. It was partially guaranteed by the state. On March 4, 1850, the institute became defunct; GS 1850, p. 272; Meitzen, III, 144-45.

^gIn spite of the name of the institute, its statute recognized three classes of property owners it catered to, the gentry, manorial owners, and the smallholder; Hübner, II, 79.

Sources: Cahill, pp. 39-40; Hübner, II, 49-69, 79, 110-13, 405-6, 408; Meitzen, III, 130-47; ZSB, XV (1875), 345-46.

2. State and District Mortgage Credit Banks (Darlehnskassen).

a. Liability guaranteed by the public authority:

Districts of operation (Name of bank, head office, year of foundation)	Minimum amt. of loan	Avg'd. loan amt. (year)
Brunswick (Braunschweig, 1765) . . . .	. . .	5,000 mark (1907)
Saxe-Altenburg (Herzogliche Landesbank zu Altenburg, 1792) . . . . .	. . .	. . .
Sigmaringen/Hohenzollern (1834)	. . .	. . .
Bautzen/Saxony (Landständische Hypothekenbank des Königlich sächsischen Markgrafentums Oberlausitz, Bautzen, 1844) . . . .	. . .	. . .
Saxe-Meiningen (1849)	50 mark	. . .
Saxe-Coburg-Gotha (Gothaische Landeskreditanstalt, Gotha, 1853)	300 mark	1,600 mark (1907)
Schwarzburg-Rudolfstadt (1855) . . . .	. . .	. . .

b. Liability guaranteed jointly by public authorities and the estates^a:

Districts of operation (Name of bank, head office, year of foundation)	Minimum amt. of loan	Avg'd. loan amt. (year)
Cassel (Kassler Landeshypothekenbank, 1832) . . . . .	. . .	2,700 mark (1909)
Province of Hanover (Hannoversche Landeskreditanstalt, Hannover, 1840)	600 mark	11,000 mark (1907)
Nassau District (Nassauische Landeskreditkasse, 1840; after 1849: Nassauische Landesbank, Wiesbaden)	150 mark	. . .
Silesia and Upper Lusatia (Königliches Kreditinstitut für Schlesien, Berlin, 1835) ^b . . . . .	. . .	. . .

^aThese are more rent-charge banks than mortgage institutes.

^bThe Royal Credit Institute of Silesia; supra, sec. 1, App. D.

Sources: Cahill, pp. 54, 61-63; Hübner, II, 463-65; ZSB, XV (1875), 346.

APPENDIX E

TRADE OF MORTGAGE BONDS AND PRUSSIAN STATE TREASURY BONDS
AT THE BERLIN STOCK EXCHANGE 1807-1860^a
(in per cent of face values)

Year	Agricultural Mortgage Bonds													
	Treasury Bonds		EastPruss.		WestPruss.		Pomeranian		Posen		KurNeuMark.		Silesian	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
1807	82	50	91½	82½	88¼	65½	95½	89	..	..	94½	87½	86½	81
1808	75	25	84½	53½	75	47½	90½	66½	..	..	88	59½	88½	58½
1809	63½	34	75	55	63	48½	89½	73½	..	..	82½	67½	87½	72½
1810	63½	44½	61½	54	58½	54½	84½	80½	..	..	80½	74½	87½	79½
1811	57¼	44	54½	47¼	54½	45½	86	77½	..	..	86	73	80	62½
1812	44	28	46¼	33½	45½	34½	87	69½	..	..	82½	64½	70½	58
1813	50½	24½	60½	36½	60½	41½	91	76½	..	..	91½	75½	81½	60
1814	81¼	50½	87½	61	84½	60½	100	90	..	..	98½	87½	95½	75
1815	86	51	91	69¼	89½	64½	103	95½	..	..	102	93½	99	81½
1820	71¼	67	92	86½	92	86	103½	102	..	..	103¼	102	106½	103
1825	92	84¼	93	87	91	86	102	100¼	97	89½	103	100¼	105¼	102½
1830	101½	81¼	102¼	92½	102	84½	106½	101½	103¼	85½	106¼	100¼	107	100½
1835	102	99½	102½	101	102½	101	106½	104½	103¼	102¼	106½	101¼	107¼	106
1840	104¼	101½	102½	101	102½	100	104	102	107	104½	104½	101½	103½	102
1845	100¼	98	100¼	96½	99	96¼	100¼	97	99	94	100½	97	100	97
1847	95¼	92	97¼	94½	94¼	90½	96	92½	93¼	90½	97	93	98	95½
1848	93	64	96	72	91¼	73½	93	82¼	91½	65	94¼	84	96¼	83
1850	90	74	94½	84	92¼	81½	96¼	91	91½	87	96½	90½	95½	94½
1855	88½	83¼	95	91	92	87¼	99½	92	95	91½	99	96½	94	91¼
1860	87	82	85	80½	84¼	80	89	85	95½	88¼	91½	86	90	86

^aMeitzen, III, 135-36. Between 1837 and 1842, the rate of interest was lowered from 4 per cent per annum to 3½ per cent per annum.

APPENDIX F

BUSINESS OF THE PRUSSIAN LAND MORTGAGE CREDIT ASSOCIATIONS
(in million of thaler)

Abbreviations:

- A: Total value of bonds in circulation.
 B: Value of bonds issued since last entry.
 C: Value of bonds redeemed since last entry.
 D: Net increase of value of bonds over last entry (B-C).
 E: Percentage increase of value of bonds over last entry.

	1805 ^a	1815 ^a	1825	1835	1845	1855	1860
SILESIA							
a. Incorporated							
A:	24.2	30.	38.0	40.5	37.0	42.2	45.2
B:	...	...	10.3	5.5	3.5	7.5	3.6
C:	...	...	3.0	3.0	7.0	1.5	1.4
b. Unincorporated							
A:	...	...	...	...	...	1.4	1.9
B:	...	...	...	...	...	1.0	0.4
C:	...	...	...	...	...	0.4	0.5
c. Sum							
A (of a+b)	24.2	30.7	38.0	40.5	37.0	43.6	47.1
D (of a+b)	...	6.5	7.3	2.5	-3.5	6.6	2.1
E	...	26.9	23.5	6.6	...	17.8	4.8
KUR & NEUMARK							
A:	3.8	4.2	8.1	11.4	12.7	11.9	13.7
B:	...	...	4.1	3.5	2.3	0.1	2.6
C:	...	...	0.2	0.2	1.0	0.9	0.8
D:	...	0.4	3.9	3.3	1.3	-0.8	1.8
E:	...	10.5	92.5	40.7	11.4	...	15.1
POMERANIA							
A:	6.8	7.8	12.9	14.9	15.0	15.6	18.1
B:	...	...	5.4	2.3	0.8	1.1	2.7
C:	...	...	0.3	0.3	0.7	0.5	0.2
D:	...	1.1	5.1	2.0	0.1	0.6	2.5
E:	...	14.8	65.4	15.5	0.7	4.0	16.0
WEST PRUSSIA							
A:	9.9	10.0	10.6	10.0	10.1	13.0	16.1
B:	...	...	1.5	1.0	1.4	3.1	3.7
C:	...	...	0.9	1.6	1.3	0.2	0.6
D:	...	0.1	0.6	-0.6	0.1	2.9	3.1
E:	...	1.0	6.0	...	1.0	28.7	23.9

	1805 ^a	1815 ^a	1825	1835	1845	1855	1860
EAST PRUSSIA							
A:	9.2	10.0	11.1	11.2	10.8	12.3	13.5
B:	...	...	1.7	1.1	1.0	2.2	1.9
C:	...	...	0.6	1.0	1.4	0.7	0.7
D:	...	0.8	1.1	0.1	-0.4	1.5	1.2
E:	...	8.7	11.0	0.9	...	13.9	9.8
POSEN							
A:	...	...	2.3	12.6	17.7	22.0	19.8
B:	...	...	3.1	10.4	6.3	6.9	4.4 ^c
C:	...	...	...	0.1	1.2	2.6	2.2
D:	...	...	...	10.3	5.1	4.3	-2.2
E:	...	...	...	447.8	40.5	24.3	...
ROYAL CREDIT INSTITUTE OF SILESIA ^d							
A:	...	...	...	0.1	4.7	5.1	4.2
B:	...	...	...	...	5.2	2.3	0.1
C:	...	...	...	...	0.6	1.9	1.0
D:	...	...	...	...	4.6	0.4	-0.9
E:	...	...	...	...	...	8.7	...
TOTAL FOR PRUSSIA							
A:	53.9	62.7	83.0	100.7	108.0	123.5	132.5
E:	...	16.3	32.2	21.4	7.2	14.4	7.3

^aThere are only incomplete records available for the period between 1805 and 1815.

^bIncorporated properties are those of the large landowners, the unincorporated those of the smallholders, the latter not forming part of the collective security of the institute.

^cThe institute was reconstituted in 1857.

^dThe institute became defunct in 1850.

Sources: Hübner, II, 55-69; Meitzen, III, 137-39.

APPENDIX G

TRADE OF PRUSSIAN ANNUITY BONDS AND STATE TREASURY BONDS
AT THE BERLIN STOCK EXCHANGE 1852-1860^a
(in per cent of face values)

Date	State Treasury Bonds ^b	PRUSSIAN ANNUITY BONDS ^c						
		Prussian	Pomeranian	Posen	KurNeuMark.	Silesian	Saxon	Rhnd.-Westphalian
Apr. 15, 1852	90	100	100½	100	100½	100½	100	100
Oct. 15, 1852	93½	101	101½	100½	101½	100½	101	100
Apr. 15, 1853	92½	101½	101½	101	101½	101	101	100½
Oct. 15, 1853	90½	99½	100	99½	100	99½	99½	99½
Apr. 15, 1854	82½	90	93½	89½	93½	90½	91	91
Oct. 16, 1854	85½	93½	95½	93½	95	94	94½	95
Apr. 16, 1855	83½	94½	95½	93	94	93½	95½	94
Oct. 15, 1855	85½	95	96½	94½	95½	95	94½	95
Apr. 15, 1856	86	95½	95½	92	95	93	95½	95
Oct. 15, 1856	84	91½	93½	90½	92½	91½	93	94½
Apr. 15, 1857	84	91½	92	90½	92½	93	93½	92½
Oct. 15, 1857	81½	89	90	87½	90½	90	90	93
Apr. 15, 1858	84	91	92	91	92½	93	93	93½
Oct. 15, 1858	84	91	92	91	92½	92½	92	92½
Apr. 15, 1859	82½	91½	91½	89½	91½	91½	93	92½
Oct. 15, 1859	83	90½	91	89	91½	91	91	91
Apr. 16, 1860	82½	92	92½	90½	93	92½	93	92
Oct. 15, 1860	86½	94	95	92	95½	95	96½	94½

^aMeitzen, III, 123.

^bRate of interest at 3½ per cent.

^cRate of interest at 4 per cent.

APPENDIX H

CAPITALIZATION OF PRUSSIAN RAILWAY COMPANIES TO 1853
(in thousands of thaler)

Year	Number of companies		Issued shares		Credit obligations (5)	Total investment		Construction capital		Return of investment (10) ^b
	Licensed (1)	operating (2)	of licensed companies (3)	of operating companies (4)		current year (6) ^a	total to-date (7)	issued shares (8)	total to-date (9)	
1837 ^c	..	..	9,078	..	7,130	16,208	16,208	..	..	..
1839	..	..	6,000	..	1,500	7,500	23,708	..	..	..
1840	..	..	5,875	..	915	6,790	30,498	..	..	..
1841 ^d	..	..	8,003	..	2,047	10,050	40,548	..	..	..
1842	..	..	1,700	..	?	1,700	42,248	..	..	..
1843	..	..	23,000	..	17,150	40,150	82,398	..	..	..
1844 ^e	11	6	15,937	10,700	7,150	23,087	105,485	..	14,166	5.12
1845	11	8	13,300	19,530	13,200	26,500	131,985	..	30,890	4.39
1846 ^f	9	9	14,150	24,756	?	14,150	146,135	..	37,103	4.97
1847	13	12	6,000	49,308	2,612	8,612	154,747	..	81,180	4.28
1848	17	17	1,738	77,441	7,270	9,008	163,755	..	119,440	3.21
1849	21	21	1,200	90,428	4,800	6,000	169,755	..	139,740	3.82
1850	22	22	300	94,704	4,312	4,612	174,367	..	146,660	4.65
1851	?	22	..	95,254	..	..	..	..	149,916	5.02
1852	?	23	..	96,783	..	..	..	..	154,492	5.75
1853	63	30	..	..	..	..	..	..	197,992	..
1854 ^g	..	..	97,406	..	80,223	177,629	..	68,000	252,414	..

^aThis column represents the sum of column (3) and column (5).

^bAverage net earnings expressed as per cent of invested capital as shown in column (7).

^cThe Berlin-Potsdam Eisenbahn-Gesellschaft of 1837 merged into the Berlin-Potsdam-Magdeburger Eisenbahn-Gesellschaft in 1845. All data therefore appears among the figures of 1845.

^dThe Berlin-Frankfurt Eisenbahn-Gesellschaft of 1840 merged into the Niederschlesisch-Märkische Eisenbahn-Gesellschaft in 1843. All data therefore appears among the figures of 1843.

^eZSB, XV(1875), 430, reports that for this year there were 27,408,000 thaler of new shares issued. It could not be determined whether this figure or our of column (6) is correct.

^fThe newly issued shares for this year could not be placed. However, the available evidence seems to suggest that the 5,226,000 thaler issued by the operating companies found ready buyers at the stock exchanges.

^gThe figure of column (8) represents capital either pledged or invested in 20 companies which were in the planning stage. The figure is not included in that of column (9).

Sources: EVS, [III], 2214-35, passim; G. Fleck, Das preussische Eisenbahnwesen im Jahre 1848, Sitzungsbericht des Vereins für Eisenbahnkunde, Archiv für Eisenbahnkunde, XXI (1898); Henderson, State, pp. 150-89, passim; HS, pp. 610-41, passim; ZSB, XV (1875), 430.

APPENDIX I

BANK-NOTES OF THE BANK OF PRUSSIA IN CIRCULATION 1847-1860
(in million of thaler)

Year	Circulating	Metallic secured	Percentage metallic secured
1847	12.0	12.7	105-1/2
1848	15.0	11.3	75-1/2
1849	16.4	17.2	105
1850	18.4	19.5	106
1851	18.9	20.1	106-1/2
1852	20.0	23.9	119-1/3
1853	19.8	17.0	85-2/3
1854	19.9	19.8	99-1/2
1855	19.9	24.4	122-1/2
1856	31.9	19.5	61-1/6
1857	60.1	30.9	51
1858	67.7	45.0	66-1/2
1859	75.3	52.5	69-4/5
1860	81.4	69.5	85-3/8

Source: Poschinger, II, 352, 373.

BIBLIOGRAPHY

A. Primary Sources

I. PUBLIC DOCUMENTS

Cahill, J. R. Report to the British Board of Agriculture and Fisheries of an Inquiry into Agricultural Credit and Agricultural Co-operation in Germany. London: H. M. Stationary Office, 1913.

Cologne. Chamber of Commerce. Jahresbericht der Handelskammer zu Köln, 1850.

Great Britain. Board of Agriculture. Communications to the Board of Agriculture, 1794, Vol. I, Pt. IV, "Letter by Dr. Albrecht Thaer."

_____. Parliament. Parliamentary Papers (House of Commons), 1833, Vd. VI (Reports, vol. 2). "Report from the Select Committee on Manufactures, Commerce and Shipping," Minutes of Evidence, May 16 and May 21, 1833.

_____. Parliament. Parliamentary Papers (House of Commons), 1841, Vol. VII (Reports, vol. 4). "Report from the Select Committee on Exportation of Machinery," Minutes of Evidence, March 10 and March 11, 1841.

Korn, Georg Anton Werner, comp. Schlesische Ediktsammlung 1770. Breslau: Korn, 1870.

Prussia. Allgemeines Landrecht für die Preussischen Staaten. 1794.

_____. Gesetz-Sammlung für die Königlichen Preussischen Staaten.

_____. Novum corpus constitutionum.

II. CONTEMPORARY OPINION

a. Collections and Periodical Publications

Allgemeine Augsburger Zeitung, No. 333, 28 Nov. 1832.

Büchner, Georg. Sämtliche Werke. Edited by Paul Stapf. Berlin: Deutsche Buch-Gemeinschaft, 1959.

Hansen, Joseph, comp. Gustav von Mevissen: Ein rheinisches Lebensbild 1815-1899. Vol. II: Schriften, Reden, Briefe. Berlin: Reimer, 1906.

List, Friedrich. Gesammelte Schriften. Edited by Ludwig Häusser. 3 vols. Stuttgart: Cotta, 1850.

b. Individual Publications

Bergius, Carl Julius. Das Geld- und Bankwesen in Preussen. Breslau: Aderholz, 1846.

_____. Die preussischen Gewerbe-gesetze. Leipzig: Hübner, 1857.

_____. Preussische Zustände. Münster: Deiters, 1844.

Bülau, Friedrich. Der Staat und die Industrie. Leipzig: Göscher, 1834.

Bülow-Cummerow, Ernst Gottfried Georg von. Das Bankwesen in Preussen mit Bezug auf die Cabinetsordre vom 11. April 1846. Berlin: Veit, 1846.

_____. Politische und finanzielle Abhandlungen. 2 vols. Berlin: Veit, 1844-55.

_____. Preussen, seine Verfassung, seine Verwaltung, sein Verhältnis zu Deutschland. 2 vols. Vol. I, Berlin: Veit, 1842; Vol. II, Jena: Frommann, 1843.

_____. Die Taxen und das Reglement der landwirtschaftlichen Credit-vereine nach ihren nothwendigen Reformen. Berlin: Veit, 1847.

_____. Ueber die gegenwärtige allgemeine Creditlosigkeit und über die Mittel sie gründlich zu beseitigen. Berlin: Schneider, 1848.

_____. Ueber die neue Organisation der Königlichen Bank und die Betheiligung der Privatpersonen bei derselben. Berlin: Veit, 1846.

Dietërici, C. F. W. Ueber Preussische Zustände, über Arbeit und Kapital: Ein politisches Selbstgespräch. Berlin: Mittler, 1848.

Engels, Friedrich. "Die Bewegung von 1847." Karl Marx, Friedrich Engels, Werke. Vol. IV. Berlin: Dietz, 1969.

"Das Ergebnis der Getreideernten im neunzehnten Jahrhundert, besonders in Beziehung auf England und auf Norddeutschland." Deutsche Vierteljahrs-Schrift, XXXVII (1847), Heft 2, 1-19.

Gülich, Gustav von. Geschichtliche Darstellung des Handels, der Gewerbe und des Ackerbaus der bedeutendsten handeltreibenden Staaten unserer Zeit. 5 vols. Jena: Frommann, 1830-45.

- Krug, Leopold. Geschichte der staatswissenschaftlichen Gesetzgebung im preussischen Staate, von den ältesten Zeiten bis zu dem Ausbruch des Krieges im Jahre 1806. Berlin: Reimer, 1808.
- Mohl, Moriz. Ueber Bank-Manöver, Bankfrage und Krisis. Stuttgart: Liesching, 1858.
- Mohl, Robert. Erörterungen über die württembergische Staatsschuld. Tübingen: Laupp & Siebeck, 1847.
- Nebenius, Carl Friedrich. Der deutsche Zollverein, sein System und seine Zukunft. Carsruhe: Müller, 1835.
- _____. "Ueber die Entstehung und Erweiterung des grossen deutschen Zollvereins." Deutsche Vierteljahrs-Schrift, [XXVIII] (1838), Heft 2, 319-59.
- Die neuen Bankverordnungen in Preussen: Unmassgebliches Votum eines Finanzmannes. Hamburg: Vogel, 1846.
- Niebuhr, Marcus. Bankrevolution und Bankreform: Wort eines Laien für Laien. Berlin: Besser, 1846.
- _____. Geschichte der Königlichen Bank in Berlin: Von der Gründung derselben (1765) bis zum Ende des Jahres 1845, aus amtlichen Quellen. Berlin: Decker, 1854 [the enlarged but undistributed 1848 edition].
- Rodbertus-Jagezow, Johann Karl. Die preussische Geldkrisis. Anclam: Dietze, 1845.
- Struensee von Karlsbach, Karl August. Abhandlungen über wichtige Gegenstände der Staatswirthschaft. 3 vols. Berlin: Herbig, 1800.
- Viehbahn, Georg Wilhelm von. Ueber Leinen- und Woll-Manufakturen, deren Ursprung, Umfang und Leistungen in Deutschland, deren Werth und Fortschritte. Berlin: Reimarus, 1846.
- Vincke, Karl Frhr. von. "Über die Bewegungen in den Jahren 1847 und 1848: Ungedruckte Briefe." Edited by Georg von Below. Deutsche Revue für das gesamte nationale Leben der Gegenwart, XXVII (1902), 91-100.
- Ziehl, Adolph. Unsere Kredit-Verhältnisse und die Creirung neuer Circulationsmittel. Aachen: Mayer, 1848.

c. Debates and Protocols

- Germany. Stenographischer Bericht über die Verhandlungen der deutschen constituirenden Nationalversammlung zu Frankfurt am Main. 1848-49.

Prussia. Verhandlungen über den Ersten Vereinigten Landtag in Berlin 1847.

Verhandlungen des Vereins zur Beförderung des Gewerbefleißes in Preussen.
20 vols. Berlin: Duncker & Humblot, 1821-40.

III. STATISTICAL SOURCES

Bergius, Carl Julius. Das Geld- und Bankwesen in Preussen. Breslau: Aderholz, 1846.

_____. Grundsätze der Finanzwissenschaft mit besonderer Beziehung auf den Preussischen Staat. Berlin: Guttentag, 1865.

Biengräber, A. Statistik des Verkehrs und Verbrauchs im Zollverein für die Jahre 1842-1864: Nach den veröffentlichten amtlichen Kommerzial-Uebersichten etc. dargestellt. Berlin: Duncker, 1868.

Brockhage, Bernhard. Zur Entwicklung des preussisch-deutschen Kapital-exports. Vol. I: Der Berliner Markt für ausländische Staatspapiere 1816 bis um 1840. Leipzig: Duncker & Humblot, 1910.

Cahill, J. R. Report to the British Board of Agriculture and Fisheries of an Inquiry into Agricultural Credit and Agricultural Cooperation in Germany. London: H. M. Stationary Office, 1913.

Cologne. Chamber of Commerce. Jahresbericht der Handelskammer zu Köln, 1850.

Dieterici, C. F. W. Handbuch der Statistik des preussischen Staats. Berlin: Mittler, 1861.

_____. Statistische Uebersicht der wichtigsten Gegenstände des Verkehrs und Verbrauchs im deutschen Zollvereine. 2 vols. Berlin: Mittler, 1842-44.

_____. Der Volkswohlstand im Preussischen Staate: In Vergleichen aus den Jahren vor 1806 und von 1828 bis 1832, so wie aus der neuesten Zeit, nach statistischen Ermittlungen und dem Gange der Gesetzgebung aus amtlichen Quellen dargestellt. Berlin: Mittler, 1846.

Engels, Ernst. "Die Hypotheken-Obligationen ausgebenden Grundcredit-Institute, insbesondere im preussischen Staate." Zeitschrift des Königlich Preussischen Statistischen Bureau's, XV (1875), 333-48.

"Das Ergebnis der Getreideernten im neunzehnten Jahrhundert, besonders in Beziehung auf England und auf Norddeutschland." Deutsche Vierteljahrs-Schrift, XXXVII (1847), Heft 2, 1-19.

- Fleck, Georg. Das preussische Eisenbahnwesen im Jahre 1848. Sitzungsbericht des Vereins für Eisenbahnkunde. Archiv für Eisenbahnwesen, XXI (1898).
- Gülich, Gustav von. Geschichtliche Darstellung des Handels, der Gewerbe und des Ackerbaus der bedeutendsten handeltreibenden Staaten unserer Zeit. 5 vols. Jena: Frommann, 1830-45.
- Heaton, Herbert. "Economic Changes and Growth." The New Cambridge Modern History. Vol. X: The Zenith of European Power 1830-1870. Edited by J. P. T. Bury. Cambridge: University Press, 1960.
- Hoffmann, Walther G. The Growth of Industrial Economics. Translated by W. O. Henderson and W. H. Chaloner. Manchester: University Press, 1958.
- _____. Das Wachstum der deutschen Wirtschaft seit der Mitte des 19. Jahrhunderts. Berlin: Springer, 1965.
- Hübner, Otto. Die Banken. 2 vols. Leipzig: Hübner, 1854.
- Koellmann, Wolfgang. "The Population of Barmen before and during the Period of Industrialization." Population in History: Essays in Historical Demography. Edited by D. V. Glass and D. E. C. Eversley. London: Arnold, 1965.
- Krug, Leopold. Geschichte der preussischen Staatsschulden. Edited by C. J. Bergius. Breslau: Trewendt, 1861.
- Mauersberg, Hans. Deutsche Industrien im Zeitgeschehen eines Jahrhunderts: Eine historische Modelluntersuchung zum Entwicklungsprozess deutscher Unternehmen von ihren Anfängen bis zum Stand von 1960. Stuttgart: Fischer, 1966.
- _____. Wirtschafts- und Sozialgeschichte zentraleuropäischer Städte in neuerer Zeit. Göttingen: Vandenhoeck & Ruprecht, 1960.
- Meitzen, August. Der Boden und die landwirtschaftlichen Verhältnisse des Preussischen Staates nach dem Gebietsumfange vor 1866. 6 vols. and Atlas supplement. Berlin: Wiegandt & Hempel, 1868-1901.
- Müller, Karl August, ed. Statistisches Jahrbuch für 1845. Leipzig: Hinrich, 1845.
- Die neuen Bankverordnungen in Preussen: Unmassgebliches Votum eines Finanzmannes. Hamburg: Vogel, 1846.
- Niebuhr, Marcus. Geschichte der Königlichen Bank in Berlin: Von der Gründung derselben (1765) bis zum Ende des Jahres 1845, aus amtlichen Quellen. Berlin: Decker, 1854 [the enlarged but undistributed 1848 edition].

Prussia. Königliches Statistisches Bureau. Jahrbuch für die amtliche Statistik des Preussischen Staates, I (1863), II (1867), III (1869).

_____. Zeitschrift des Königlich Preussischen Statistischen Bureaus.

Reden, Frhr. Friedrich Wilhelm von. Allgemeine Handels- und Gewerbs-Geographie und Statistik: Ein Handbuch für Kaufleute, Fabrikanten und Staatsmänner. Berlin: Königliche Handels-Lehranstalt, 1843.

_____. Erwerbs- und Verkehrs-Statistik des Königsstaats Preussen: In vergleichender Darstellung. 3 vols., consecutively paginated. Darmstadt: Jonghaus, 1853-54.

Schmoller, Gustav. Zur Geschichte der deutschen Kleingewerbe im 19. Jahrhundert: Statistische und nationalökonomische Untersuchungen. Halle: Buchhandel des Waisenhauses, 1970.

The Times (London), April 6, 1818.

Tilly, Richard. Financial Institutions and Industrialization in the Rhineland 1815-1870. London, Madison: University of Wisconsin Press, 1966.

_____. "Germany. 1815-1870." Banking in the Early Stages of Industrialization: A Study in Comparative Economic History. Compiled and edited by Rondo Cameron. New York: Oxford University Press, 1967.

Viebahn, Georg Wilhelm von. Statistik des zollvereinten und nördlichen Deutschlands. 3 vols. Berlin: Reimer, 1858-68.

_____. Ueber Leinen- und Woll-Manufakturen, deren Ursprung, Umfang und Leistungen in Deutschland, deren Werth und Fortschritte. Berlin: Reimarus, 1846.

Wagner, Adolph. System der Deutschen Zettelbankgesetzgebung, unter Vergleichung mit der ausländischen: Zugleich ein Handbuch des Zettelbankwesens. Freiburg i. Br.: Fr. Wagner, 1870.

_____. System der Zettelbankpolitik, mit besonderer Rücksicht auf das geltende Recht und auf deutsche Verhältnisse: Ein Handbuch des Zettelbankwesens [Vol. II of the aforementioned]. Freiburg i. Br.: Fr. Wagner, 1873.

Waltershausen, A. Sartorius von. Deutsche Wirtschaftsgeschichte 1815-1914. 2d enl. ed. Jena: Fischer, 1923.

Zeitschrift des Vereins für Deutsche Statistik (Berlin).

Ziehl, Adolph. Unsere Kredit-Verhältnisse und die Creirung neuer Circulationsmittel. Aachen: Mayer, 1848.

IV. PERSONAL AND INSTITUTIONAL HISTORIES

a. Autobiographies and Memoirs

Duckwitz, Arnold. Denkwürdigkeiten aus meinem öffentlichen Leben von 1841-1866: Ein Beitrag zur bremischen und deutschen Geschichte. Bremen: Schünemann, 1877.

Hohenlohe-Ingelfingen, Kraft Prinz zu. Aus meinem Leben: Aufzeichnungen. Vol. I: Vom Revolutionsjahr 1848 bis zum Ende des Kommandos in Wien. Berlin: Mittler, 1897.

Wichmann, Wilhelm. Denkwürdigkeiten aus der Paulskirche. Hanover: Helwing, 1888.

b. Biographies

Bergengrün, Alex. David Hansemann. Berlin: Guttentag, 1901.

Berger [Witten], L. Der alte Harkort: Ein westfälisches Lebens- und Zeitbild. Leipzig: Baedeker, 1890.

Delbrück, Rudolf von. Lebenserinnerungen 1817-1867. 2 vols. Leipzig: Duncker & Humblot, 1905.

Hansen, Joseph. Gustav von Mevissen: Ein rheinisches Lebensbild 1815-1899. 2 vols. Berlin: Reimer, 1906.

Schwann, Mathieu. Ludolf Camphausen als Wirtschaftspolitiker. 3 vols. Essen: Baedeker, 1915.

Trost, Friedrich. "August Borsig." Die grossen Deutschen: Deutsche Biographie. Edited by Hermann Heimpel, Theodor Heuss, and Benno Reifenberg. 5 vols. Berlin: Deutsche Buch-Gemeinschaft, 1956.

c. Institutional Histories

Ehrenberg, Richard. Grosse Vermögen, ihre Entstehung und ihre Bedeutung. Vol. I: Die Fugger, Rothschild, Krupp. 3d ed. Jena: Fischer, 1925.

Geschichte der Handelskammer zu Frankfurt am Main, 1767-1908. Frankfurt-am-Main: Baer, 1908.

Niebuhr, Marcus. Geschichte der Königlichen Bank in Berlin: Von der Gründung derselben (1765) bis zum Ende des Jahres 1845, aus amtlichen Quellen. Berlin: Decker, 1854 [the enlarged but undistributed 1848 edition].

Reichsbankdirektorium. Von der Königlichen Bank zur Deutschen Reichsbank: 175 Jahre deutscher Notenbankgeschichte 20. Juli 1765-20. Juli 1940. Berlin, 1940.

Schauer, Kurt. Die Preussische Bank: Unter Benutzung amtlicher Quellen. Halle a. S.: John, 1912.

Seidenzahl, Fritz. "175 Jahre Ritterschaftliches Kreditinstitut Lüneburg: Nach erfolgreicher Vergangenheit Rückzug aus dem Bankgeschäft." Tradition, XII (1967), 334-41.

Die Württembergische Sparkasse in Stuttgart am Ende des neunzehnten Jahrhunderts: Eine Denkschrift aus Anlass der Einweihung des neuen Anstaltgebäudes im Dezember 1900. Stuttgart: Bonz, [1900].

d. Travel Reports

Elsner, Johann Gottfried. Landwirtschaftliche Reise durch Schlesien, nebst einigen Ausflügen nach der Mark Brandenburg, Sachsen, Mähren und Oesterreich, in Briefen beschrieben. 4 vols. Breslau: Max, 1823 (Vols. I and II); Berlin: Rücker, 1825 (Vols. III and IV).

Hodgskin, Thomas. Travels in the North of Germany, describing the Present State of the Social Institutions particular in the Kingdom of Hannover. 2 vols. Edinburgh: Constable, 1820.

Russel, John. A Tour in Germany and some of the Southern Provinces of the Austrian Empire, in 1820, 1821, 1822. 2d ed. 2 vols. Edinburgh: Constable, 1825.

V. ECONOMIC THEORY

Baran, P. A., and E. J. Hobsbawn. "The Stages of Economic Growth." Kyklos, XIV (1961), 234-42.

Cole, W. A. "The Growth of National Incomes." The Cambridge Economic History of Europe. Vol. VI: The Industrial Revolutions and after: Incomes, Population and Technological Change. Edited by H. J. Habakkuk and M. Postan. Cambridge: University Press, 1965.

Conze, Werner. Die Strukturgeschichte des technisch-industriellen Zeitalters als Aufgabe für Forschung und Unterricht. Cologne: Böhlau, 1967.

Dovring, Folke. "The Transformation of European Agriculture." The Cambridge Economic History of Europe. Vol. VI: The Industrial Revolutions and after: Incomes, Population and Technological Change. Edited by H. J. Habakkuk and M. Postan. Cambridge: University Press, 1965.

- Friedman, Milton. The Optimum Quantity of Money and Other Essays. Chicago: Aldine, 1969.
- Gerschenkron, Alexander. Economic Backwardness in Historical Perspective: A Book of Essays. Cambridge, Mass.: Harvard University Press, 1962.
- Ghosh, Santimur. Inflation in an Underdeveloped Economy: A Study of Inflation in India. Calcutta: World Press, 1959.
- Grossmann, Eugen. "Finanzen und Währung." Handbuch der Finanzwissenschaft. Edited by Wilhelm Gerloff and Fritz Neumark. Vol. I. 2d rev. ed. Tübingen: Mohr, 1952.
- Hobsbawn, E. J. (joint author), and P. A. Baran. "The Stages of Economic Growth." Kyklos, XIV (1961), 234-42.
- Hoffmann, Walther G. The Growth of Industrial Economics. Translated by W. O. Henderson and W. H. Chaloner. Manchester: University Press, 1958.
- _____. "The Take-Off in Germany." The Economics of Take-Off into Sustained Growth. Proceedings of a conference held by the International Economic Association. Edited by W. W. Rostow. London: MacMillan, 1963.
- Klatt, Sigurd. Zur Theorie der Industrialisierung: Hypothesen über die Bedingungen, Wirkungen und Grenzen eines vorwiegend durch technischen Fortschritt bestimmten wirtschaftlichen Wachstums. Cologne: Westdeutscher Verlag, 1959.
- König, Heinz. "Ansätze und Probleme der Wachstumstheorie." Wachstum und Entwicklung in der Wirtschaft. Edited by Heinz König. Cologne: Kiepenheuer & Witsch, 1968.
- Lewis, W. Arthur. The Theorie of Economic Growth. Homewood, Ill.: Irwin, 1955.
- Marx, Karl. Das Kapital: Kritik der politischen Ökonomie. Vol. II: Der Zirkulationsprozess des Kapitals. Edited by Friedrich Engels, re-edited by the Marx-Lenin-Engels Institute, Moscow (1932). 5th ed. Berlin: Dietz, 1955.
- Rostow, W. W., ed. The Economics of Take-Off into Sustained Growth. Proceedings of a conference held by the International Economic Association. London: MacMillan, 1963.
- Rostow, W. W. The Process of Economic Growth. New York: Norton, 1962.
- Schumpeter, Joseph. Theorie der wirtschaftlichen Entwicklung: Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus. 2d rev. ed. Munich: Duncker & Humblot, 1926.

- Shearer, Ronald A. "The Concept of Economic Growth." Kyklos, XIV (1961), 497-532.
- Spiethoff, Arthur. Die wirtschaftlichen Wechsellagen: Aufschwung, Krise, Stockung. 2 vols. Tübingen: Mohr, 1955.

B. Secondary Sources

- Abel, Wilhelm. Die drei Epochen der deutschen Agrargeschichte. Hanover: Schaper, 1964.
- _____. Geschichte der deutschen Landwirtschaft vom frühen Mittelalter bis zum 19. Jahrhundert. 2d rev. ed. Stuttgart: Ulmer, 1967.
- Albrecht, Paul. Die wirtschaftlichen und sozialen Fragen in der Frankfurter Nationalversammlung. Halle: Thiele, 1914.
- Balser, Frolinde. "Sozial-Demokratie 1848/49 bis 1863. Die erste deutsche Arbeiterorganisation 'Allgemeine deutsche Arbeiterverbrüderung' nach der Revolution." Moderne deutsche Sozialgeschichte. Edited by Hans-Ulrich Wehler. Cologne: Kiepenheuer & Witsch, 1966.
- Banck, Rudolf. Geschichte der sächsischen Banken mit Berücksichtigung der Wirtschaftsverhältnisse. Dresden: Heinrich, 1896.
- Bergius, Carl Julius. Grundsätze der Finanzwissenschaft mit besonderer Beziehung auf den Preussischen Staat. Berlin: Guttentag, 1865.
- Böhme, Helmut. Frankfurt und Hamburg: Des Deutschen Reiches Silber- und Goldloch und die allerenglischste Stadt des Kontinents. Frankfurt-am-Main: Europäische Verlagsanstalt, 1968.
- Brockhage, Bernhard. Zur Entwicklung des preussisch-deutschen Kapital-exports. Vol. I: Der Berliner Markt für ausländische Staatspapiere 1816 bis um 1840. Leipzig: Duncker & Humblot, 1910.
- Cahill, J. R. Report to the British Board of Agriculture and Fisheries of an Inquiry into Agricultural Credit and Agricultural Cooperation in Germany. London: H. M. Stationary Office, 1913.
- Cameron, Rondo. Introduction to Banking in the Early Stages of Industrialization. Edited by Rondo Cameron. Oxford: University Press, 1967.
- Cole, W. A. "The Growth of National Incomes." The Cambridge Economic History of Europe. Vol. VI: The Industrial Revolutions and after: Incomes, Population and Technological Change. Edited by H. J. Habakkuk and M. Postan. Cambridge: University Press, 1965.

- _____. (joint author), and Phyllis Deane. British Economic Growth 1688-1959: Trends and Structure. 2d ed. Cambridge: University Press, 1967.
- Deane, Phyllis. The First Industrial Revolution. Cambridge: University Press, 1967.
- _____, and W. A. Cole. British Economic Growth 1688-1959: Trends and Structure. 2d ed. Cambridge: University Press, 1967.
- Conze, Werner. "Das Spannungsfeld von Staat und Gesellschaft." Staat und Gesellschaft im deutschen Vormärz 1815-1848. Edited by Werner Conze. Stuttgart: Klett, 1962.
- Fleck, Georg. "Studien zur Geschichte des preussischen Eisenbahnwesens. V: Die Anfänge des preussischen Eisenbahnwesens östlich der Oder." Archiv für Eisenbahnwesen, XXI (1898), 653-80.
- Finck von Finckenstein, Hans Wolfram Graf. Die Entwicklung der Landwirtschaft in Preussen und Deutschland 1800-1930. Würzburg: Holzner, 1960.
- Fischer, Wolfram. Der Staat und die Anfänge der Industrialisierung in Baden 1800-1850. Vol. I: Die staatliche Gewerbepolitik. Berlin: Duncker & Humblot, 1962.
- _____. "Das Verhältnis von Staat und Wirtschaft in Deutschland am Beginn der Industrialisierung." Kyklos, XIV (1961), 337-63.
- Friedman, Milton. A Monetary History of the United States 1867-1960. Princeton, N.J.: University Press, 1963.
- Goltz, Theodor Frhr. von der. Geschichte der deutschen Landwirtschaft. 2 vols. Reprint of the Stuttgart 1903 ed., Aalen: Scientia, 1963.
- Grünberg, Karl. Die Bauernbefreiung und die Auflösung des gutsherrlich-bäuerlichen Verhältnisses in Böhmen, Mähren und Schlesien. 2 vols. Leipzig: Duncker & Humblot, 1894.
- Hamerow, Theodore S. Restoration, Revolution, Reaction: Economics and Politics in Germany 1815-1871. Princeton, N.J.: University Press, 1958.
- Handlin, Oscar. "The Modern City as a Field of Historical Study." The Historian and the City. Edited by Oscar Handlin and John Burchard. Cambridge, Mass.: M.I.T., [c1963] 1967.
- Hasek, Carl William. The Introduction of Adam Smith's Doctrines into Germany. New York: Columbia University Press, 1925.
- Henderson, W. O. Britain and Industrial Europe, 1750-1870: Studies in British Influence on the Industrial Revolution in Western Europe. Leicester: Leicester University Press, 1965.

- _____. The Industrial Revolution on the Continent: Germany, France, Russia 1800-1914. London: Cass, 1961.
- _____. The State and the Industrial Revolution in Prussia 1740-1870. Liverpool: University Press, 1958.
- _____. The Zollverein. Cambridge: University Press, 1939.
- Hoffmann, Erich. "Bevölkerungsentwicklung und Nahrungserzeugung." Urania: Monatsschrift über Natur und Gesellschaft, XVIII (1954), 286-89, 326-29.
- Hoffmann, Walther G. The Growth of Industrial Economics. Translated by W. O. Henderson and W. H. Chaloner. Manchester: University Press: 1958.
- Hübner, Otto. Die Banken. Leipzig: Hübner, 1854.
- Kanter, Hugo. Die Entwicklung des Handels mit gebrauchsfertigen Waren von der Mitte des 18. Jahrhunderts bis 1866 zu Frankfurt a.M. Tübingen: Mohr, 1902.
- Kaulla, Rudolf. Die Organisation des Bankwesens im Königreich Württemberg in ihrer geschichtlichen Entwicklung. Stuttgart: Enke, 1908.
- Kehr, Eckart. Der Primat der Innenpolitik: Gesammelte Aufsätze zur preussisch-deutschen Sozialgeschichte. Edited by Hans-Ulrich Wehler. Berlin: de Gruyter, 1965.
- Klein, Ernst. Von der Reform zur Restauration: Finanzpolitik des preussischen Staatskanzlers Karl August von Hardenberg. Berlin: de Gruyter, 1965.
- Knapp, Georg Friedrich. Die Bauernbefreiung und der Ursprung der Landarbeiter in den älteren Teilen Preussens. 2 vols. Leipzig: Duncker & Humblot, 1887.
- Koellmann, Wolfgang. "The Population of Barmen before and during the Period of Industrialization." Population in History: Essays in Historical Demography. Edited by D. V. Glass and D. E. C. Eversley. London: Arnold, 1965.
- Krampe, Hans Dieter. Der Staatseinfluss auf den Ruhrkohlenbergbau in der Zeit von 1800 bis 1865. Cologne: Rheinisch-westfälisches Wirtschaftsarchiv, 1961.
- Krug, Leopold. Geschichte der preussischen Staatsschulden. Edited by Carl Julius Bergius. Breslau: Trewendt, 1861.
- Leiskow, Hanns. Spekulation und öffentliche Meinung in der ersten Hälfte des 19. Jahrhunderts. Jena: Fischer, 1930.

Liebel, Helen P. "Der Beamte als Unternehmertyp in den Anfangsstadien der Industrialisierung: Johann Friedrich Muller und die Staats- und Wirtschaftsreformen Württembergs, 1750-1780." Entstehung und Entwicklung der modernen Gesellschaft: Festschrift für Hans Rosenberg. Edited by Gerhard Ritter and Wolfgang Sauer. Berlin: de Gruyter, 1970.

_____. Enlightened Bureaucracy versus Enlightened Despotism in Baden 1750-1792. Transactions of the American Philosophical Society. Philadelphia, 1965.

_____. "Inflation: Its History and Policy, 1500-1968." Dalhousie Review, XLIX (1968), 5-19.

_____. "Laissez-faire vs. Mercantilism: The Rise of Hamburg & The Hamburg Bourgeoisie vs. Frederick the Great in the Crisis of 1763." Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte, LII (1965), 207-38.

Lotz, Albert. Geschichte des Deutschen Beamtentums. Berlin: Decker, 1906.

Lütge, Friedrich. Deutsche Sozial- und Wirtschaftsgeschichte: Ein Überblick. 3d enl. ed. Berlin: Springer, 1966.

_____. Geschichte der deutschen Agrarverfassung vom frühen Mittelalter bis zum 19. Jahrhundert. Stuttgart: Ulmer, 1936.

Martin, Frederick. Stories of Banks and Bankers. London: MacMillan, 1865.

Mauersberg, Hans. Deutsche Industrien im Zeitgeschehen eines Jahrhunderts: Eine historische Modelluntersuchung zum Entwicklungsprozess deutscher Unternehmen von ihren Anfängen bis zum Stand von 1960. Stuttgart: Fischer, 1966.

_____. Wirtschafts- und Sozialgeschichte zentraleuropäischer Städte in neuerer Zeit. Göttingen: Vandenhoeck & Ruprecht, 1960.

Meinecke, Friedrich. "Zur Geschichte des Gedankens der preussischen Hegemonie." Historische Zeitschrift, LXXXII (1899), 98-104.

Mieck, Ilja. Preussische Gewerbepolitik in Berlin 1806-1844: Staatshilfe und Privatinitiative zwischen Merkantilismus und Liberalismus. Berlin: de Gruyter, 1965.

Müller, Waldemar. "The Organization of Credit and Banking Arrangements in Germany." Miscellaneous Articles on German Banking. National Monetary Commission, Senate, 61st Cong., 2nd sess., Doc. 508. Washington, D.C.: Government Printing Office, 1910.

Nebenius, Carl Friedrich. Der deutsche Zollverein, sein System und seine Zukunft. Karlsruhe: Müller, 1835.

_____. "Ueber die Entstehung und Erweiterung des grossen deutschen Zollvereines." Deutsche Vierteljahrs-Schrift, XXVIII (1838), Heft 2, 319-59.

- Nitzsche, Max. Die handelspolitische Reaktion in Deutschland: Eine historisch-politische Studie. Stuttgart: Cotta, 1905.
- Noyes, P. H. Organization and Revolution. Princeton, N.J.: University Press, 1966.
- Pinson, Koppel S. Modern Germany: Its History and Civilization. 2d ed. New York: MacMillan, 1966.
- Poschinger, Heinrich von. Bankwesen und Bankpolitik in Preussen: Nach amtlichen Quellen bearbeitet. 3 vols. Berlin: Springer, 1878-79.
- Price, Arnold H. The Evolution of the Zollverein: A Study of the Ideas and Institutions leading to German Economic Unification between 1815 and 1833. Ann Arbor, Mich.: University Press, 1949.
- Rachel, Hugo, and Paul Wallich. Berliner Grosskaufleute und Kapitalisten. Vol. III: Übergang zum Hochkapitalismus 1804-1856. Berlin: Gesellius, 1939.
- Riesser, Jacob. The German Great Banks and their Concentration in Connection with the Economic Development of Germany. 3d enl. ed. National Monetary Commission, Senate, Doc. 593. Washington, D.C.: Government Printing Office, 1911.
- Rosenberg, Hans. Grosse Depression und Bismarckzeit: Wirtschaftsablauf, Gesellschaft und Politik in Mitteleuropa. Berlin: de Gruyter, 1967.
- Schmoller, Gustav. Umriss und Untersuchungen zur Verfassungs-, Verwaltungs- und Wirtschaftsgeschichte, besonders des preussischen Staates im 17. und 18. Jahrhundert. Leipzig: Duncker & Humblot, 1898.
- _____. Zur Geschichte der deutschen Kleingewerbe im 19. Jahrhundert: Statistische und nationalökonomische Untersuchungen. Halle a.S.: Buchhandel des Waisenhauses, 1870.
- Sombart, Werner. Die deutsche Volkswirtschaft im neunzehnten Jahrhundert. 3d rev. ed. Berlin: Bondi, 1913.
- Stadelmann, Rudolf. Soziale und politische Geschichte der Revolution von 1848. Munich: Münchener Verlag, 1948.
- Terhalle, Fritz. "Geschichte der deutschen öffentlichen Finanzwirtschaft vom Beginn des 19. Jahrhunderts bis zum Schlusse des zweiten Weltkrieges." Handbuch der Finanzwissenschaft. Edited by Wilhelm Gerloff and Fritz Neumark. Vol. I. 2d rev. ed. Tübingen: Mohr, 1952.
- Tilly, Richard. Financial Institutions and Industrialization in the Rhineland 1815-1870. London, Madison: University of Wisconsin Press, 1966.
- _____. "Germany, 1815-1870." Banking in the Early Stages of Industrialization: A Study in Comparative Economic History. Comp. and ed. by Rondo Cameron. New York: Oxford University Press, 1967.

- Treitschke, Heinrich von. Deutsche Geschichte im Neunzehnten Jahrhundert.
6th ed. Leipzig: Hirzel, 1906-8.
- Wallich, Paul (joint author), and Hugo Rachel. Berliner Grosskaufleute
und Kapitalisten. Vol. III: Übergang zum Hochkapitalismus
1804-1856. Berlin: Gesellius, 1939.
- Waltershausen, A. Sartorius von. Deutsche Wirtschaftsgeschichte
1815-1914. 2d enl. ed. Jena: Fischer, 1923.
- Wernicke, J. Der Kampf um den wirtschaftlichen Fortschritt: Ein kritisch-
historischer Beitrag. Jena: Fischer, 1910.
- Wunderlich, Frieda. Farm Labor in Germany 1810-1945: Its Historical
Development within the Framework of Agricultural and Social Policy.
Princeton, N.J.: University Press, 1961.
- Zunkel, Friedrich. "Beamtenschaft und Unternehmertum beim Aufbau der
Rheinindustrie 1849-1880." Tradition, IX (1964), 261-77.

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